OL. 74 NO. 2

textile bulletin

FEBRUARY • 1948

REPORT ON THE INDIAN TEXTILE INDUSTRY furnishes pictures of current and expected conditions in that country. The article begins on Page 41.

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Ask anyone in the weave room this question

"What's the first requirement of a Loom Lubricant?" . . . They'll answer, "Stay-ability." That "built-in" quality which keeps NON-FLUID OIL in bearings and off goods.

Super-adhesive NON-FLUID OIL stays where applied increasing production and outlasting oil 3 to 5 times. But remember, the woods are full of all sorts of imitations of NON-FLUID OIL. Write for Bulletin T 20 TB and free testing sample of NON-FLUID OIL.

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292 Madison Avenue, New York, N. Y.
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WAREHOUSES: Atlanta, Ga.—Greenville, S. C.—Charlotte, N. C.—
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NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture.

NON-FLUID OIL
TRADE MARK REGISTERED

15.2%
EXPORT

84.8%
DOMESTIC

Yes The rest of the World wants automatic looms, too, but of our last 12 months' output, only 15.2% has gone into the Export market.

Loading a 48" X-2 loom for shipment by air

And

During the same 12 months, we have built more than twice as many looms as our annual average for the past 15 years.

So

Many more Draper looms were built last year for mills in the United States, than in any other year since the introduction of the X Series high speed looms and in 1948 we anticipate a still greater volume of looms will be shipped to the mills of this country.

D

DRAPER CORPORATION
Hopedale Massachusetts

TEXTILE BULLETIN is published monthly by Clark Publishing Co., 218 West Morehead Street, Charlotte 2, N. C. Subscription $1.50 per year in advance, $3 for three years. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.

COMMERCIAL FACTORS CORPORATION

Fred'k Vietor & Achelis, Inc.
Established 1828

Schefer, Schramm & Vogel
Established 1838

Peierls, Buhler & Co., Inc.
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EUGENE G. LYNCH, 80 FEDERAL STREET, BOSTON, MASS.
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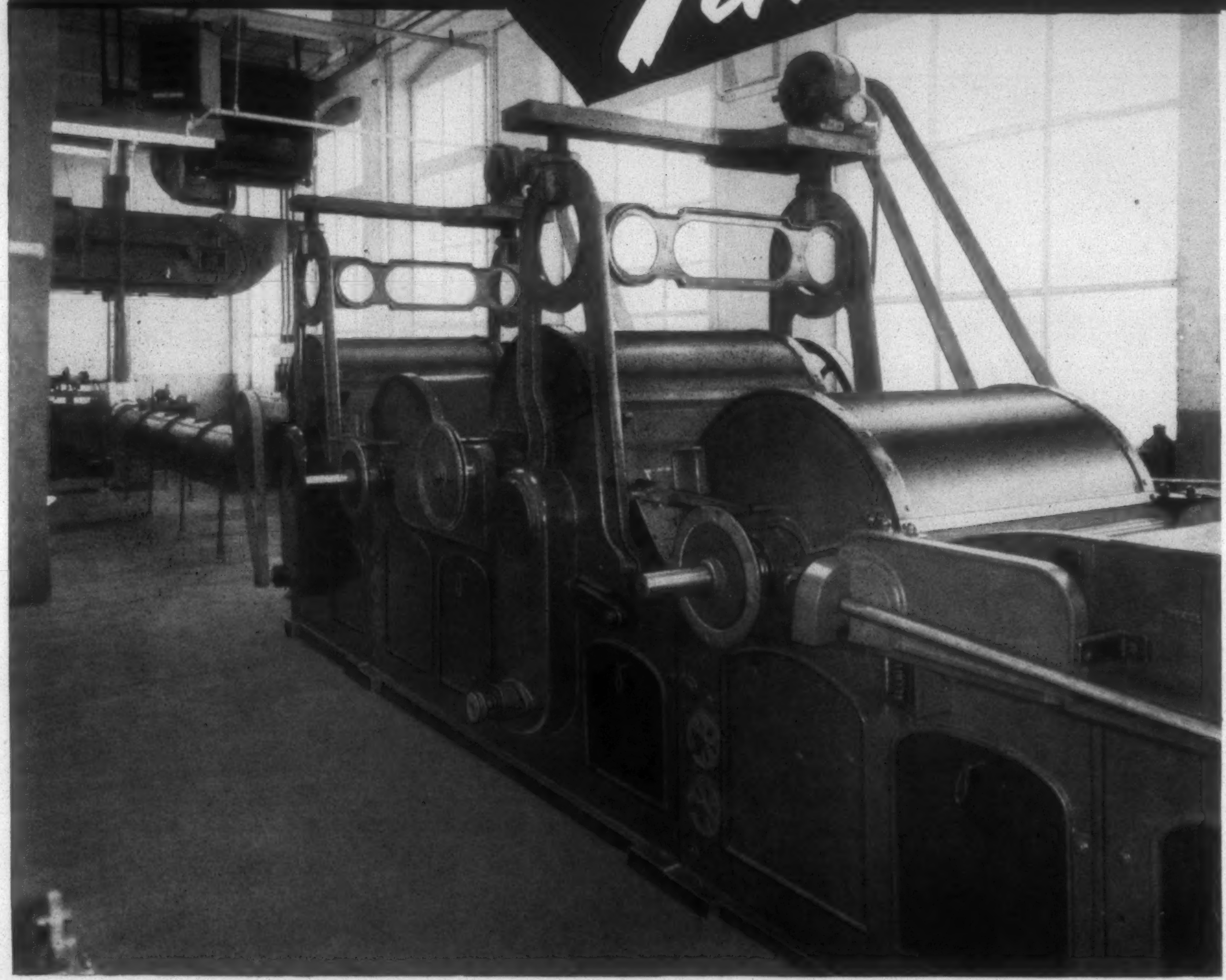
H & B *Tandem*



● The H & B Tandem Opening and Cleaning Unit is an important factor in the quality performance of H & B opening room machinery. Furnished in single, double or triple units (and tandem operation is recommended by our engineers for greater efficiency), this machine is designed to keep a flow of effectively opened and cleaned raw stock moving to the pickers.

• • •

H & B AMERICAN

Builders of Modern

FACTORY, EXECUTIVE OFFICES AND EXPORT

OPENING AND CLEANING UNIT

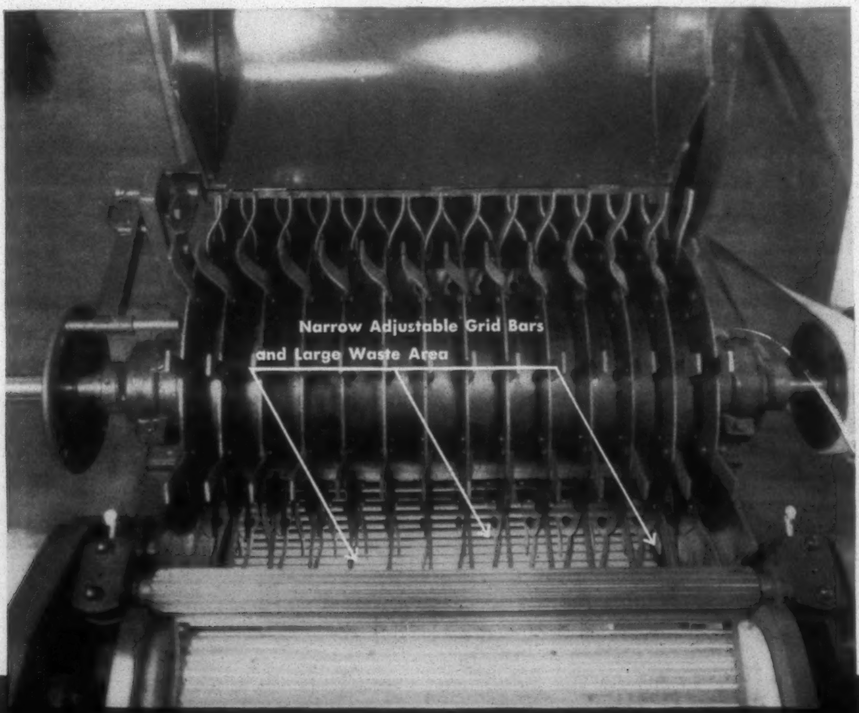
Tandem Operation Recommended

● The beater sections are equipped with 30″ diameter Buckley beaters mounted on anti-friction ball bearings. These smooth running beaters thoroughly open and clean the cotton. Dirt and leaf are collected in the large waste area under the beaters and the narrow grid bars are adjustable, according to the type cotton being processed. Beater covers and guards are locked while machine is running, for protection of operators.

The cage sections are the lattice delivery type with adjustable air vents for control of cotton on the cages. Steel bladed fans are mounted, like the beaters, on heavy ball bearings for smooth operation.

The correct flow of opened and cleaned cotton to the pickers is maintained by modern feed controls, actuated by the mercury switch on the picker. These controls stop the delivery aprons and feed rolls but allow the beaters to keep rotating. The operation of this clutch type control prevents ineffective beating due to the frequent stopping of the beaters and the consequent lag in gaining full speed again.

Because it does such an effective job of opening and cleaning, the Tandem Opening and Cleaning Unit is truly representative of the achievement of quality at H & B.



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Textile Machinery
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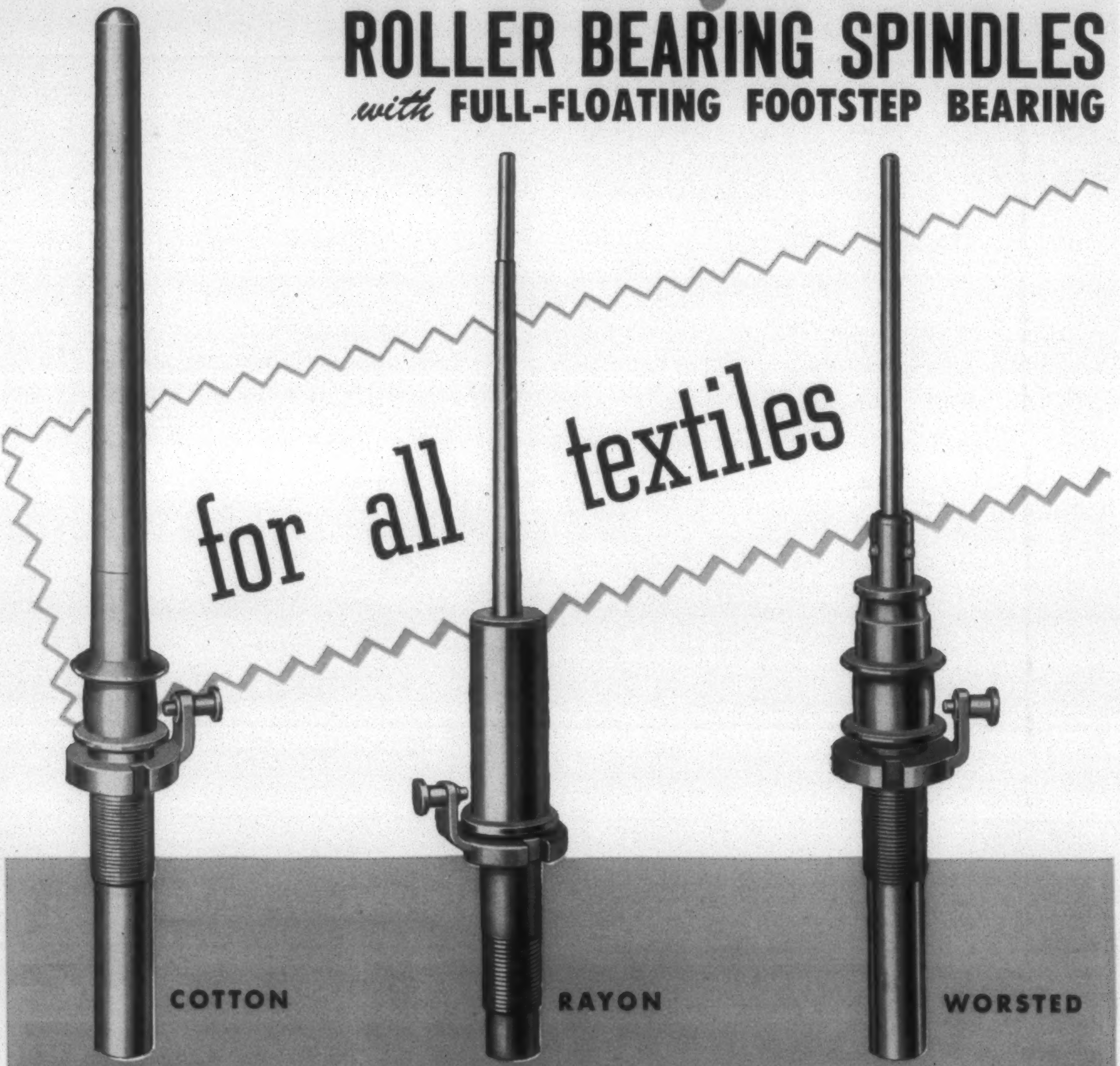
Marquette

ROLLER BEARING SPINDLES

with FULL-FLOATING FOOTSTEP BEARING



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The Marquette METAL PRODUCTS CO.

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Manufacturers of: HYDRAULIC, ELECTRIC AND AIR PRESSURE WINDSHIELD WIPERS
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WORK WITH YOU-FOR YOU!

- To reduce wear in spindles and bolsters
- Eliminate spindle gumming
- Reduce power and maintenance costs
- Reduce ends down

The Gulf Lubrication Engineer "in the picture" checks the lubrication of spinning frames in a prominent southern mill.

SCORES OF LEADING MILLS find the wide experience and broad practical knowledge of Gulf Lubrication Engineers invaluable—a source of real down-to-earth solutions for their maintenance and lubrication problems.

One of these trained specialists can help you eliminate guesswork in lubrication—assist you to get the full advantage of lubricants as engineering materials. For he is thoroughly familiar with all factors which affect lubrication efficiency—and he makes available a complete line of quality oils and greases designed for service under widely varying operating conditions, no matter how severe.

When he makes a recommendation of the right Gulf lubricant and the most suitable method of application, you can be sure of satisfactory results.

If you are not already doing so, get the benefits of this helpful engineering service. Call in a Gulf Lubrication Engineer today and ask him to give you specific cases of mills, similar to yours, who have reduced power and maintenance costs through improved lubrication. Write, wire, or phone your nearest Gulf office.

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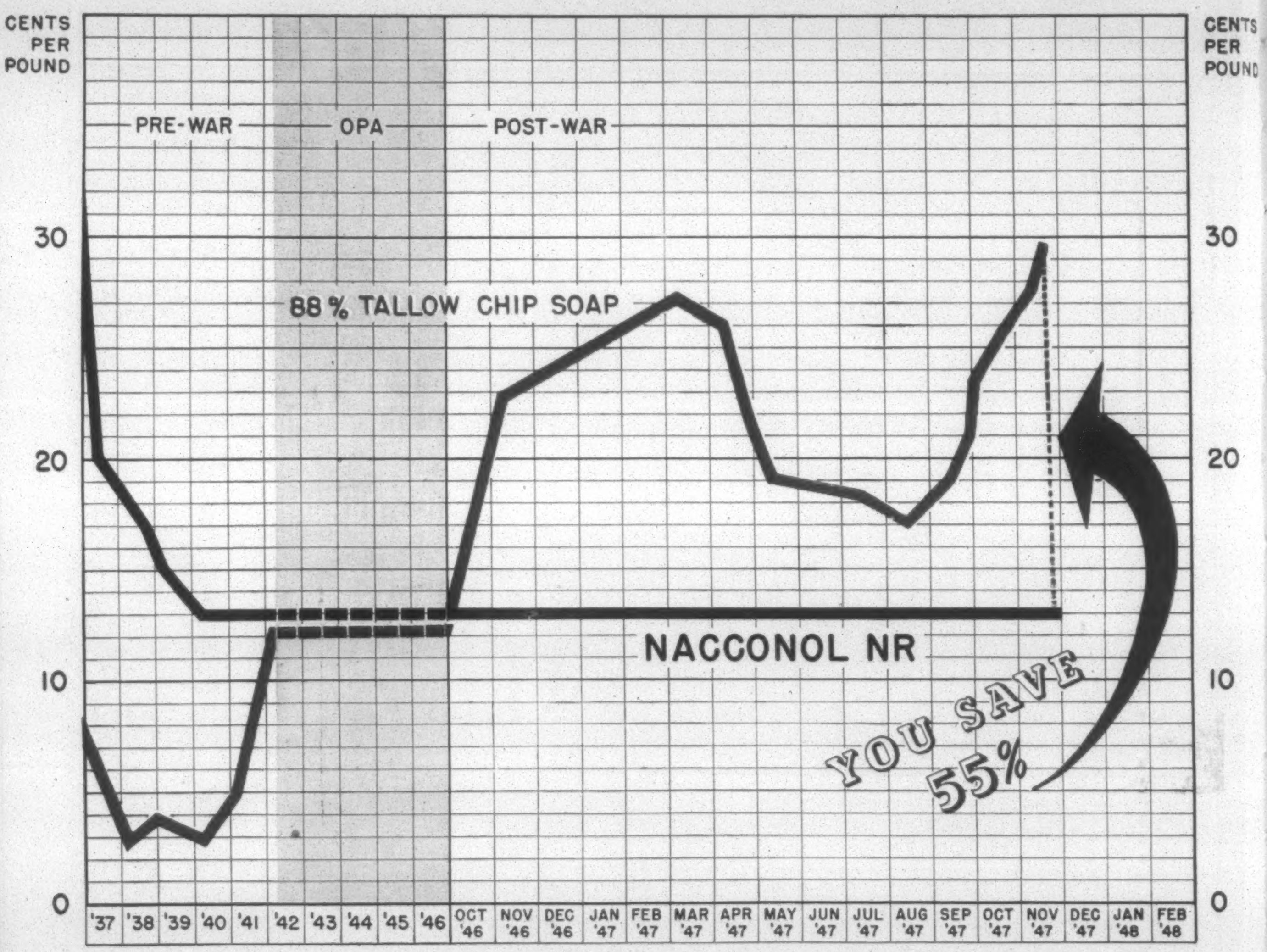
GULF INDUSTRIAL LUBRICATION

Pictures Speak Louder Than Words

COST COMPARISON - NACCONOL NR vs SOAP



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and cut your soap costs

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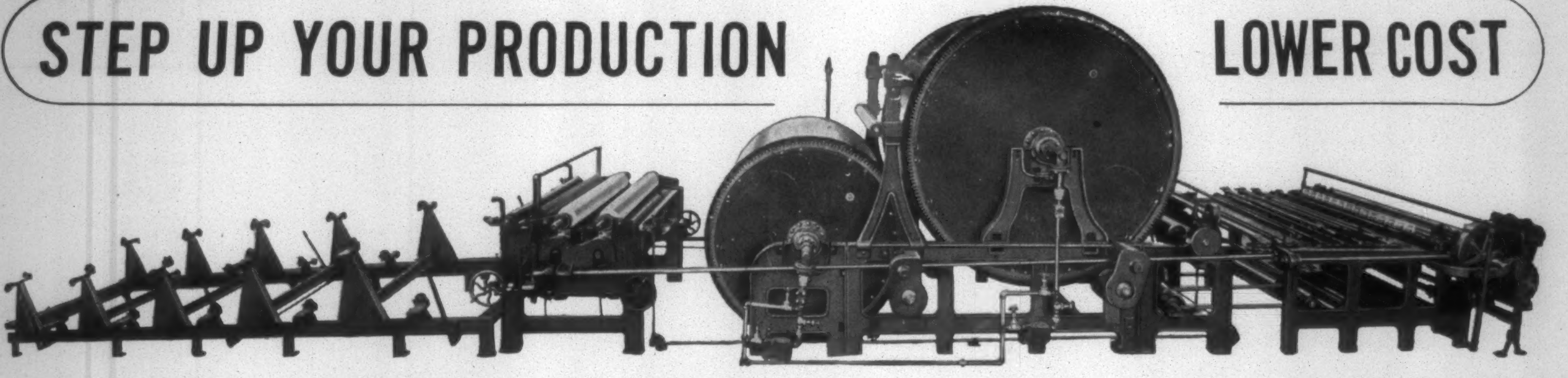
STEP UP YOUR PRODUCTION LOWER COST

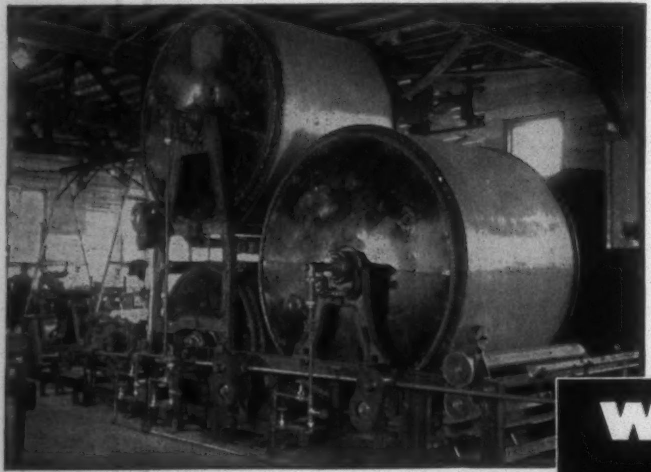


CREEL built with continuous steel side rails and heavy beam stands with adjustable ball-bearing beam journal supports . . . insures accurate constant alignment with cylinders.

HEAVY, RUGGED SIZE BOX with welded, stainless steel vat . . . extra deep bronze stuffing boxes . . . ball-bearing mounted size roll journals. Ball-bearing squeeze-roll lift eliminates strain . . . keeps rolls in perfect alignment with size rolls.

2 CYLINDER SLASHER equipped with heavy copper-covered 7′ and 5′ insulated cylinders, with bucket or syphon drains. All cylinder journals in heavy-duty, anti-friction bearings . . . positive drive (optional). Hood work . . . galvanized steel, copper or stainless steel . . . heavy-duty blower with individual motor drive.

HEAD END BALL BEARING EQUIPPED . . . including delivery and nip rolls . . . friction mounted in ball-bearing pillow blocks. Shafts of cone pulley drive mounted in anti-friction bearings.



3 CYLINDER SLASHER furnished with 5′ and 7′ cylinder and an extra 5′ or 7′ cylinder.

INSTALL A NEW IMPROVED SLASHER

From creel to head end, this Slasher includes the latest, mill-tested improvements that mean better sizing, increased production and lower operating costs.

Improved creel and size box, greater drying capacity, tension controls, positive and variable drives, anti-friction bearings, and other outstanding features assure fast, constant output of correctly sized yarn, free of excessive stretch.

The entire machine is designed and constructed for effortless, uninterrupted operation at maximum speed. Available in the following variable-speed drives:

Standard cone drive
Reeves motorized or with separate motor
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Variable DC motors with AC generator set
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Let us show you how our Slashing Machinery and methods can, in addition to increasing your Slasher room production, improve your Weave Room efficiency.

WEST POINT FOUNDRY & MACHINE CO.
(Batson-Cook Company, Owners)
WEST POINT, GEORGIA

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3-Star ★★★

"TOPS" in Leather Belting for the Textile Industry

3-Star Belting has these inherent characteristics purposely built in to meet the peculiar requirements of textile transmission. ★ Selection of leather and exclusive tanning processes give unusually high tensile strength. ★ Proper currying assures positive pulley grip. ★ Charlotte construction, famous since 1867, guarantees minimum stretch. These outstanding features are the direct result of Charlotte control over every process in the manufacture from the raw hide to the finished 3-Star Belt.

CHARLOTTE
LEATHER BELTING COMPANY
CHARLOTTE • NORTH CAROLINA

3-Star Leather Belting in the Weave Room of a Prominent Mill

AT LAST...
The Picker
YOU'VE
always wanted!

Amazing new **STEEL-HIDE** Picker by

GRATON
AND
KNIGHT

Outlasts, outperforms all other Loop Pickers . . . at no increase in price!

Only **STEEL-HIDE** gives you:

LOWER OPERATING COSTS . . . picker life is greatly extended. Inventory is greatly reduced because STEEL-HIDE is interchangeable right and left hand.

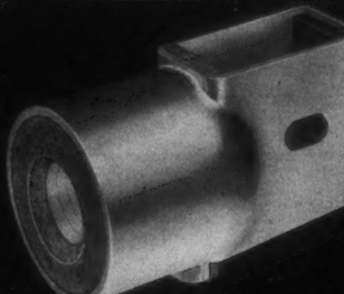
LESS CLOTH SPOILAGE . . . because picker maintains true alignment on stick. Patented loop construction: leather cushion on front absorbs shocks; rubber on back insures snug, life-long fit. Steel lip prevents rocking.

GREATER YARDAGE . . . because steel-and-leather construction gives longer loom service . . . fewer shutdowns. Heavy gauge steel sheath gives extra strength. Leather gives perfect resiliency.

SMOOTH ACTION . . . greatly improved shock absorption. No rebound. Leather layers are cemented together and bonded to steel shell. Nose leather tailored to your requirements: soft for quality rayon work; hard rawhide for high-speed cotton looms. Nose is accurately drilled to receive shuttle spur. Your boxing problems are lessened.

LESS MAINTENANCE . . . because all parts associated with picker action last longer . . . stick breakage reduced . . . shoe wear reduced.

STEEL-HIDE



Its longer life is locked in steel

Test STEEL-HIDE Yourself... *at our expense*

Mail this card
if you are using 1"x$\frac{19}{32}$" stick (other sizes available soon).

GRATON
AND
KNIGHT

will send you . . . immediately . . . a free STEEL-HIDE Picker. Put it on a high-speed loom and watch it outperform all other loop pickers. Put it on a rayon loom and watch the smoothness of its action. CONVINCE YOURSELF . . . YOU'RE THE SOLE JUDGE!

PLEASE SEND ME A FREE G&K *STEEL-HIDE* PICKER FOR TESTING.
I understand there is no obligation on my part.

Specify: Loom Model Loom Width Shuttle Width ....
☐ Narrow Nose ☐ Wide Nose
At present, for loom using 1"x$\frac{19}{32}$" sticks only. Other sizes available soon.

Name ....
Position ....
Company ....
Address ....
City .... Zone .... State ....

ONLY

GRATON AND KNIGHT

PATENTED
TEEL-HIDE PICKER
IVES YOU THESE
7
G ADVANTAGES

1 Patented loop construction . . . leather cushioned against stick for maximum resistance to impact . . . rubber lined at rear for snug fit.

2 It is ruggedly, accurately built to give you the kind of service you've always wanted.

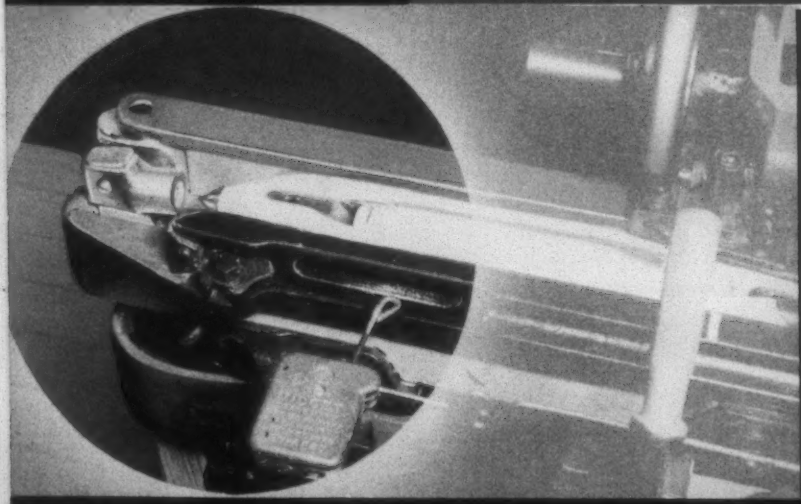
3 It gives improved shock absorption . . . there's no rebound . . . impact is fully cushioned, your boxing problems are lessened.

4 Standard design makes STEEL-HIDE pickers interchangeable right and left on the loom . . . cuts down required inventory. Two nose widths available . . . narrow for looms operating with narrow (15¾″) shuttles (such as rayon looms); wide for looms with wide (16½″) shuttles (such as cotton looms).

5 STEEL-HIDE stays in alignment on the stick . . . it won't work loose or twist on stick . . . won't rock . . . stays in place for life.

6 Steel-leather construction combines the strength of steel with the natural resiliency of laminated leather. Leather nose piece is bonded to the steel shell . . . hole is accurately shaped and positioned.

7 You get longer shuttle life. STEEL-HIDE dissipates heat more efficiently than other types of pickers . . . there's less danger of shuttle spur breaking loose.



STEEL-HIDE IS FULLY TESTED, both in the laboratory and in the field. Now in use on many looms with excellent results.

◀ Textile laboratory testing of STEEL-HIDE loom picker.

et Free Test Sample . . . Mail Reply Card Below

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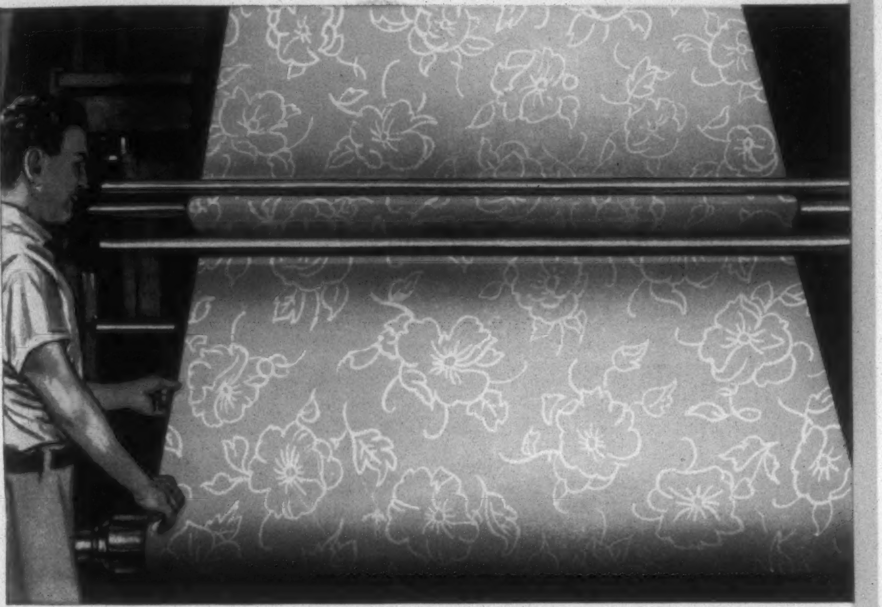
ORANGE LINE LOOM LEATHERS

A complete line manufactured by the world's largest manufacturer of industrial leathers

PROCTOR EQUIPMENT FOR THE

TEXTILE FINISHER



The growing trend to supplying finishing plant equipment *in range* makes it doubly wise to give early consideration to your needs as you anticipate expansion or modernization . . . and to select with extra care the *one* supplier whose intimate knowledge of equipment and processes will enable him to make intelligent recommendations. Proctor & Schwartz' long association with the textile industry—coupled with Proctor research men constantly working with textile technologists as new developments unfold—plus the fact that no Proctor equipment is ever recommended until its performance can be guaranteed in writing in the sales contract—indicates that your best bet is to consult Proctor & Schwartz as soon as the need for new equipment becomes apparent.

SINGLE RUN TENTER SYSTEM

for high speed drying of wide variety of fabrics and finishes

SUCTION CYLINDER DRYER

a versatile dryer employing a new and different type of circulation

ROLLER DRYER & CURER

a moderate capacity machine; can be designed for drying or curing

LOOP DRYER & CURER

a high capacity machine; can be equipped for drying or curing

DAGLISH *Overfeed* TENTER

for obtaining desired "hand" through principle of overfeeding and tenter drying

MULTIPASS *Airlay* DRYER

for achieving the ultimate in finished appearance of goods dried without tension

"SLACK" DRYER

for use in shrinking range on goods to be shrunk in both warp and filling direction

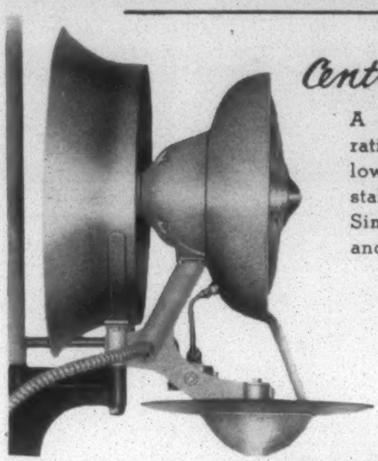
Write for this New Proctor Booklet

While intelligent recommendations on the type of equipment most suitable for your particular requirements can be made only on the basis of complete knowledge of your problem—there are certain basic types of equipment engineered and built for the textile finishing plant. A profusely illustrated, 16-page booklet which tells the story of Proctor Equipment for the Textile Finisher has just come off the press. You'll find it very informative and well worth having. Write for your copy today—while the supply lasts.

PROCTOR & SCHWARTZ, INC., PHILADELPHIA 20, PA.

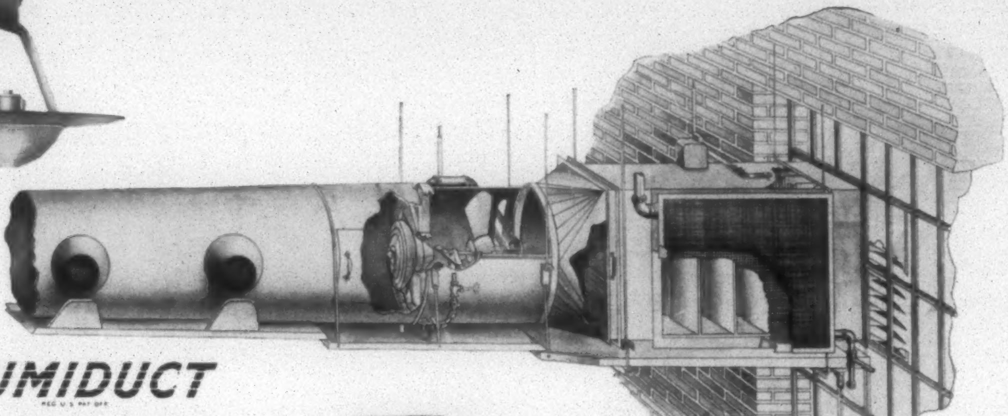
INDUSTRIAL AIR CONDITIONING

DESIGNED · ENGINEERED · MANUFACTURED · INSTALLED · SERVICED by Bahnson



Centrifugal Humidifier

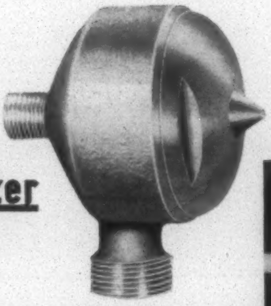
A self-contained unit offering high evaporative capacity plus directional air flow at low operating cost—for single or multiple installation with individual or master control. Simple installation requires water line, drain and electric current.



HUMIDUCT

REG. U. S. PAT. OFF.

A self-contained unit system of air conditioning for humidifying, cooling, heating, ventilating, filtering and dehumidifying—available in any desired combination.

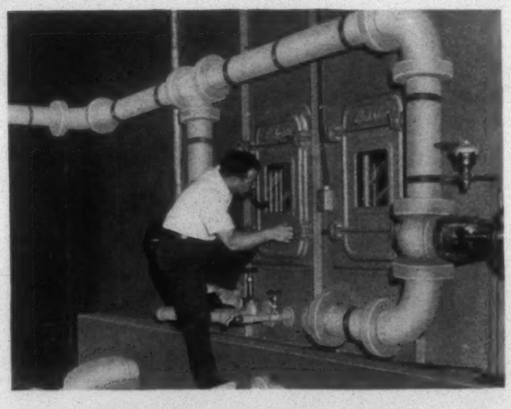


Economizer

A self-cleaning pneumatic atomizer, interchangeable with standard aspirating types, offering notable savings in compressed air when operating at similar air pressure, rate of evaporation, and spray quality.

THE BAHNSON COMPANY has specialized for 33 years in the design, engineering, manufacture, installation and service of industrial Air Conditioning Equipment—tailored for the specific requirements of varied needs in the Textile Industry.

Write for Bulletin No. 333



Air Washer Systems

Bahnson installations range in size from small laboratory units to systems handling 1000 tons of refrigeration and Bahnson air washers handling 275,000 c.f.m.

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AIR CONDITIONING ENGINEERS

POSITIVE CIRCULATION · LOWER OPERATING COST

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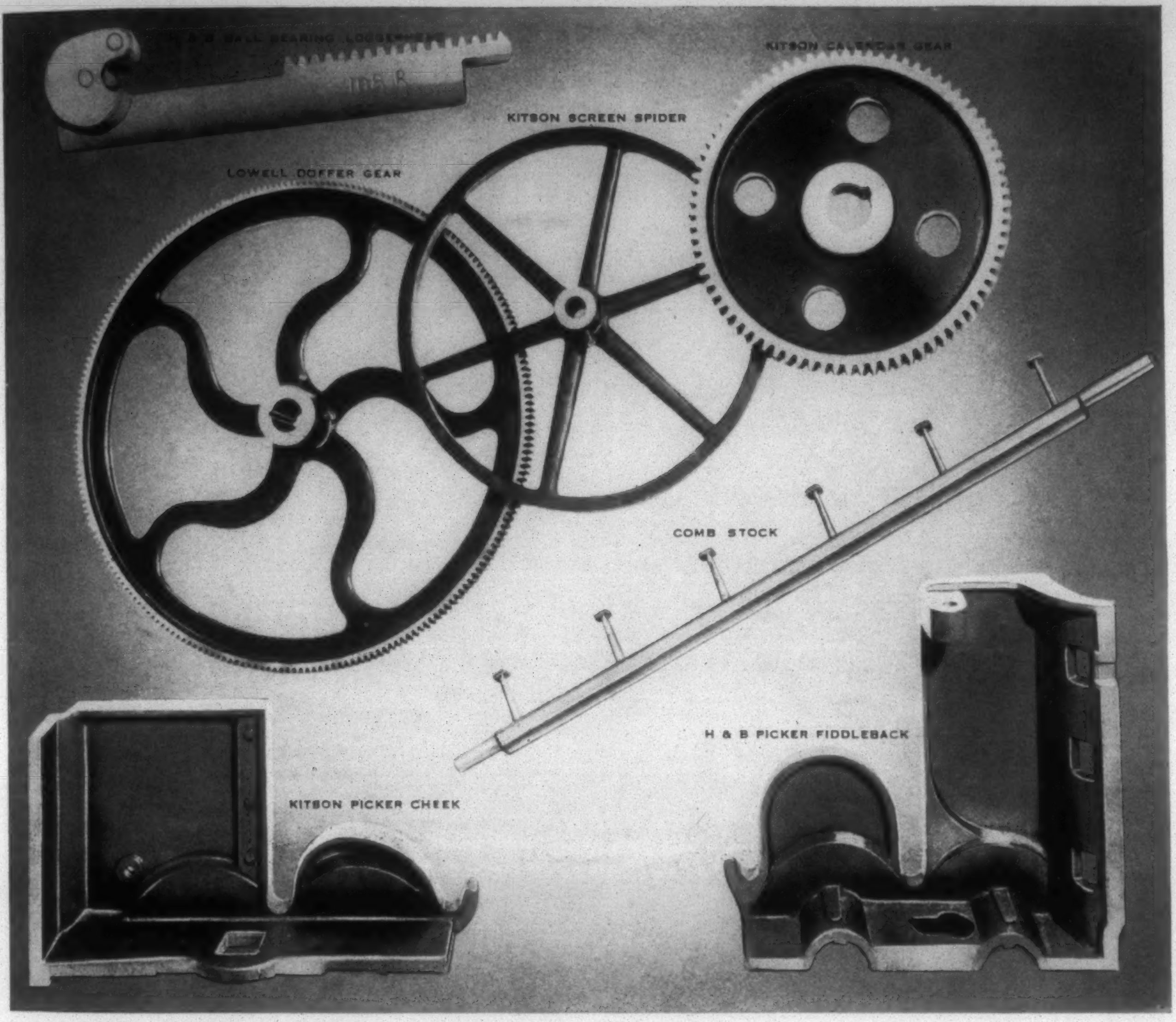

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NOT WITH US!

We have built, specifically for stock, these and other hard-to-obtain card room parts, such as bobbin, spindle and coiler gears, plate gears, lickerin shrouds, and mote knives.

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HAMPTON, GEORGIA

HENDERSON FOUNDRY & MACHINE COMPANY DIVISION

Largest Manufacturer of Cast-Tooth and Cut-Tooth Gears in the South

INCREASED PRODUCTION
+ECONOMY OF OPERATION
+BETTER QUALITY AT SAME PRICE
+ ? ? ? ? ? ? ? ? ? ? ? ?

= . . . . .PROFIT

The Fourth Profit

TEXTILE profits in the foreseeable future will probably come from savings rather than markups. For such profits textile manufacturers ordinarily look to increased production, economy of operation and better quality at the same price.

In view of the present trend toward the intermingling of fibres in various branches of the industry, manufacturers should also look for a FOURTH PROFIT in *flexibility of equipment.* For equipment that is handling one fibre today may be called upon to handle a totally different fibre tomorrow.

The Foster Model 102 Winder is unique in its field because it offers a fourth profit from flexibility and can *still* compete with or surpass other winders (which lack this same flexibility) on the basis of increased production, economy of operation and improved quality of product. Briefly, here is the story: —

FLEXIBILITY — Will handle any count or type staple yarn with same traverse mechanism — any angle of wind from 9° to 18° — any ordinary taper. Can be equipped to wind knitting or warping cones, dye packages, tubes or short traverse cheeses, one type on each side of the machine if desired.

INCREASED PRODUCTION — Doubles production over obsolete models because of high winding speeds (up to 700 y.p.m.) and labor saving devices mentioned under "ECONOMY". 7″ traverse cones, if desired.

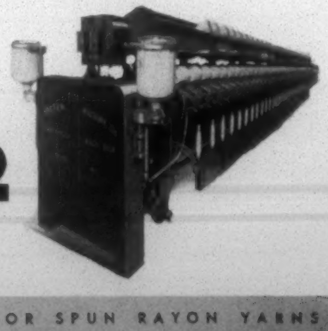
ECONOMY — Reduces operating costs ⅓ under obsolete models because of self threading tension devices, easy doffing, 7″ traverse package, if desired, and empty bobbin conveyors which empty into standard sized trucks. Repair costs as low as $3.50 per year per 100 spindle machine.

QUALITY PRODUCT — Automatic inspection. Conditioned yarn. Convex base prevents under-winding and nipping. Ribbon breaker prevents ribbon wind. Uniform density and properly shaped cones. Minimum tension on soft twist yarns prevents excess breakage.

FOSTER MACHINE CO.,
Westfield, Mass., U. S. A.

Southern Office: Johnston Bldg., Charlotte, North Carolina; Canadian Representative: Ross-Whitehead & Co., Ltd., University Tower Bldg., 660 Ste. Catherine Street, West, Montreal, Quebec; European Representative: Muschamp Taylor, Ltd., Manchester, England.

SEND FOR
BULLETIN A-95
FOR COMPLETE DATA



FOSTER MODEL 102

THE *Flexible* WINDER

FOR COTTON, MERCERIZED, WOOL, WORSTED, MERINO, SPUN SILK OR SPUN RAYON YARNS

If you want –

greater breaking strength . . .

lower sizing costs . . .

better weave-room results . . .

then you'll want

HOUGHTO-SIZE CW

When you find a warp size softener that gives you an increase in breaking strength as much as 10% greater than that obtained with your former size formulation . . .

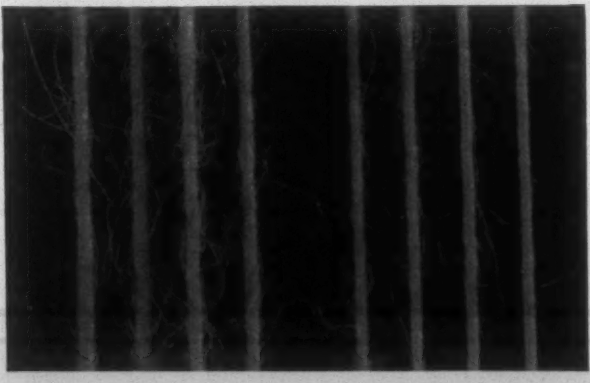
And when you do this—as many mills are now doing—with *one-third* less softener in the size kettle . . .

And further, when the new softener contains no animal fat, therefore is lower and more stable in price . . .

And lastly, when the warps thus sized are found to weave better and result in increased production . . .

Then you're going to be mighty glad you learned about HOUGHTO-SIZE CW, Houghton's sizing compound, and you're going to keep using it. For full details and test, write

E. F. HOUGHTON & CO.
Philadelphia or Charlotte



Enlarged photos such as above are a feature of the Warp Size Check-up Test, exclusive with Houghton. They show vividly what various size formulae do to improve fiber lay.

your LeBlond distributor. . . strategically located near you . . . knows metal turning as few men know it. Since he offers the largest complete line of lathes available from one manufacturer, his unbiased advice on the selection of the proper type and size for any specific use can be relied upon. Call him today without obligation.

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ATLANTA

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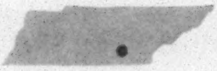

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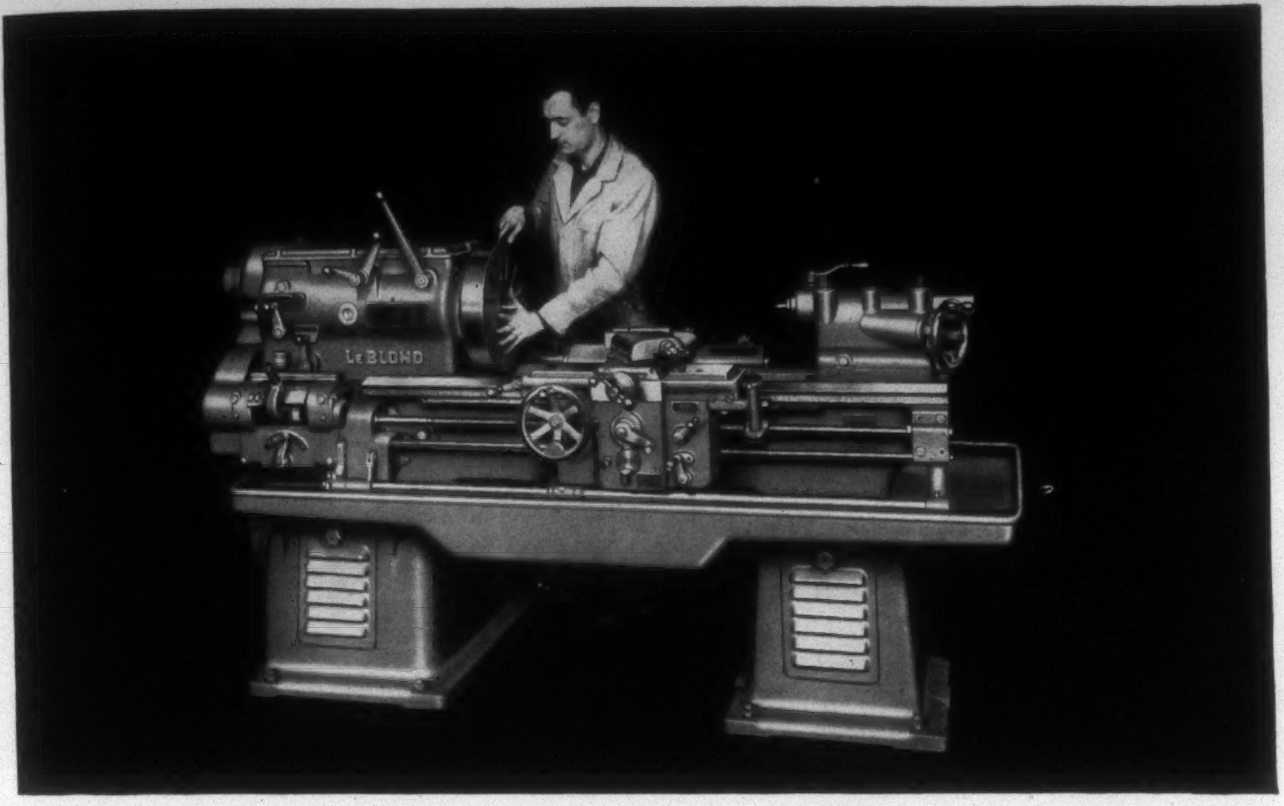

. . . WITH A LEBLOND HEAVY DUTY ENGINE LATHE

The LeBlond 12", 14", and 16" heavy duty engine lathes are used profitably by textile mills and other plants requiring accuracy, speed, and dependability. Built with all the skill and experience acquired in 60 years of lathe building, these heavy duties can lower your metal turning costs, too.

. . . no other lathe offers this combination of advance design and construction features:

- All spindle speeds controlled by two simple shift levers.
- Chrome nickel alloy gears throughout headstock.
- 3-bearing spindle.
- Hardened and ground steel bed ways front and rear.
- One-piece apron with positive jaw feed clutch.
- One lever controls both length and cross feed.
- Thrust-lock tailstock, with worm and rack construction, offers full length bearing for spindle.

For complete and detailed information on these or any other lathes in the complete LeBlond line, call or write your LeBlond distributor. The R. K. LeBlond Machine Tool Co., Cincinnati 8, Ohio.

LEBLOND

We dip the knee...
We bow the head

TO WHOM? To the leaders of the cotton textile industry the world over—the "Sanforized" licensees! For you are the men who give millions of grateful consumers the honest value they *understand and want*. So...allow us to say good and loud that you rate many, many "Thank you's!" Not only from us, but from every converter, cutter and retailer who offers serviceable cottons.

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•SANFORIZED•
TRADE ® MARK
Fabric Shrinkage less than 1%

The "Who's Who" of the Cotton World!

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AUSTRAL SILK & COTTON MILLS PTY. LIMITED....Melbourne, Australia

BRAZIL

COTONIFICIO RUDOLFO CRESPI....Rua Javry 89, Sao Paulo, Brazil
SAO PAULO ALPARGATAS, S.A....Sao Paulo, Brazil

BELGIUM

ALSBERGE & VAN OOST....Gand, Belgium

CANADA

CANADIAN COTTONS LIMITED....Montreal, Que., Canada
DOMINION TEXTILE COMPANY, LTD....Magog, Que., Canada
MONTREAL COTTONS LIMITED....Valleyfield, Que., Canada
ROBINSON COTTON MILLS, LIMITED....Toronto 2, Ont., Canada
WABASSO COTTON COMPANY LTD....Three Rivers, Que., Canada

CHILE

FABRICAS TEXTILES CAUPOLICAN-CHIGUAYANTE, S.A., Chiguayante Mill, Concepcion, Chile
JORGE HIRMAS H....Santiago, Chile

COLOMBIA

TEJIDOS EL CONDOR, S.A....Condor Mill, Medellin, Rep. of Colombia
COMPANIA COLOMBIANA DE TEJIDOS, Coltejer Mill, Medellin, Rep. of Colombia
TEJIDOS DE OCCIDENTE, S.A....Manizales, Rep. of Colombia

CUBA

COMPANIA TEXTILERA ARIGUANABO, S.A....Havana, Cuba

CZECHOSLOVAKIA

SPOJENÉ ČESKÉ A MORAVSKÉ BAVLNÁŘSKE ZÁVODY, NÁRODNÍ PODNIK, Ústi nad Orlici, Plant of Česká Trebová, Česká Trebová, Czechoslovakia

CZECHOSLOVAKIA (Continued)

TEXTILNÍ TISKÁRNY, ÚPRAVNY A BAREVNY, NÁRODNÍ PODNIK, Dvur Králové Nad Labem....Plant of Háje, Háje, Czechoslovakia
VÝCHODOČESKE BAVLNÁŘSKE ZÁVODI, NÁRODNÍ PODNIK, Nachod, Plant of Nachod, Nachod, Czechoslovakia

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BLOCH & ANDRESEN....Kobenhaven, Denmark

EIRE

SETFAST LIMITED....3, College Green, Dublin, Eire

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Eden & Thwaites, Ltd....Edgeley Bleachworks, Stockport, Cheshire, England
James Hardcastle & Co., Ltd....Bradshaw Works, Near Bolton, England
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James McHaffie & Son Ltd....Kirktonfield, Neilston (Near Glasgow), Scotland
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TOOTAL BROADHURST LEE CO., LTD.,
56 Oxford St., Manchester 1, England
YORK STREET FLAX SPINNING CO., LTD..........Belfast, Northern Ireland
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Almelo, Nijverdal, Holland
N. V. NEDERLANDSCHE STOOMBLEEKERIJ..........Nijverdal, Holland
J. F. SCHOLTEN & ZONEN N.V..........Enschede, Holland
VAN HEEK & CO., N.V..........Enschede, Holland

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SAM F. GOLDBERGER & SOHNE A.G..........Budapest, Hungary

INDIA

BINNY & CO. (MADRAS) LIMITED..........Madras, India

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COTONIFICIO VALLE DI SUSA..............8, Corso Re Umberto, Torina, Italy

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ACABADOS MEXICO, S.A..........Tlalpan, Mexico, D.F.
ATOYAC TEXTIL, S.A..........10 Nte. No. 1412, Puebla, Puebla, Mexico
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Atzcapotzalco, Mexico, D.F.
TEXTILES MONTERREY, S.A.........Mónterrey, Estado de Neuvo Leon, Mexico
NACIONAL TEXTIL MANUFACTUERA, S.A...Guadalajara, Jalisco, Mexico
C. NORIEGA Y CIA SUCS. S en C..........Mexico, D.F., Mexico
COMPANIA INDUSTRIAL DE PARRAS, S.A.........Parras, Coahuila, Mexico
COMPANIA INDUSTRIAL VERACRUZANA, S.A.,
Ciudad Mendoza, Ver., Mexico

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COMPANIAS UNIDAS VITARTE Y VICTORIA, S.A..........Lima, Peru

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MANUFAKTUR AKTIE BOLAGET I MALMOE..Box 278, Malmoe, Sweden
MOELNLYCKE VAEFVERIAKTIEBOLAG..........Goeteborg, Sweden

SWITZERLAND

GUGELMANN & CIE. A.G..........Langenthal, Switzerland
HABIS-TEXTIL A.G..........Flawil, Switzerland
HEBERLEIN & CO., A.G..........Wattwil, Switzerland
A.—G. A. & R. MOOS..........Weisslingen, Switzerland
R. MUELLER & CIE. A.G..........Seon, Switzerland
A.—G. CARL WEBER..........Winterthur, Switzerland

SYRIA

ARIDA BROTHERS CORPORATION..........Tripoli, Lebanon, Syria

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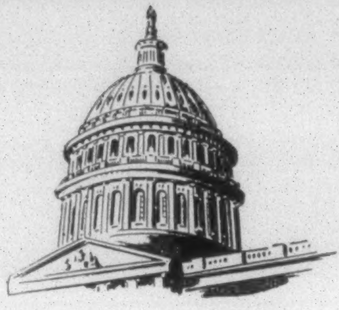
ALABAMA MILLS, INC..........Wetumpka, Ala.
AMERICAN FINISHING COMPANY..........Memphis, Tenn.
APONAUG MANUFACTURING CO..........Kosciusko, Miss.
APPLETON COMPANY, INC..........Anderson, S. C.
THE APPONAUG COMPANY—Division of Mills, Incorporated,
Apponaug, R. I.
ARMS TEXTILE MANUFACTURING CO..........Manchester, N. H.
ASHEVILLE COTTON MILLS..........Asheville, N. C.
THE ASPINOOK CORPORATION..........Jewett City, Conn.
AVONDALE MILLS..........Alexander City, Ala.
AVONDALE MILLS..........Pell City, Ala.
AVONDALE MILLS..........Sylacauga, Ala.
JOS. BANCROFT & SONS CO..........Wilmington, Del.
BELLMAN BROOK BLEACHERY CO..........Fairview, N. J.
BRADFORD DYEING ASSOCIATION (USA)..........Westerly, R. I.
BROWN MANUFACTURING CO..........Concord, N. C.
CANTON COTTON MILLS..........Canton, Ga.
CHICOPEE MANUFACTURING CORPORATION.......Chicopee Falls, Mass.
CLEARWATER MANUFACTURING CO..........Clearwater, S. C.
CLIFFSIDE MILLS..........Cliffside, N. C.
CONE FINISHING CO..........Greensboro, N. C.
CONE MILLS CORP.—White Oak Mill..........Greensboro, N. C.

UNITED STATES (Continued)

CONE MILLS CORP.—Proximity Mill..........Greensboro, N. C.
CRANSTON PRINT WORKS COMPANY..........Cranston, R. I.
CRANSTON PRINT WORKS COMPANY..........Webster, Mass.
CROMPTON-SHENANDOAH CO..........Waynesboro, Va.
CRYSTAL SPRINGS BLEACHERY..........Chickamauga, Ga.
DAN RIVER MILLS, INCORPORATED..........Danville, Va.
DELTA FINISHING COMPANY..........Frankford, Philadelphia, Pa.
THE ERWIN COTTON MILLS COMPANY..........Cooleemee, N. C.
THE ERWIN COTTON MILLS COMPANY..........Erwin, S. C.
FAIRFOREST COMPANY—Eagle & Phenix Division..........Columbus, Ga.
FAIRFOREST FINISHING CO..........Spartanburg, S. C.
FRUIT OF THE LOOM, INC..........Pontiac, R. I.
GLENLYON PRINT WORKS..........Phillipsdale, R. I.
GOLD-TEX FABRICS CORP.—Mill Division..........Rock Hill, S. C.
GOODALL-SANFORD, INC..........Sanford, Me.
GREAT FALLS BLEACHERY & DYE WORKS, INC.........Somersworth, N. H.
GRANITEVILLE COMPANY—Gregg Division..........Graniteville, S. C.
GRANITEVILLE COMPANY—Sibley-Enterprise Division..........Augusta, Ga.
HAMPTON PRINT WORKS DIV.—(The Aspinook Corp.),
Easthampton, Mass.
HANNAH PICKETT MILLS CO..........Rockingham, N. C.
HARTSVILLE PRINT & DYE WORKS..........Hartsville, S. C.
HIGHLAND PARK MANUFACTURING CO..........Charlotte, N. C.
INDUSTRIAL COTTON MILLS CO., INC..........Rock Hill, S. C.
KENDALL MILLS—(Slatersville Finishing Co.)..........Walpole, Mass.
KERR BLEACHING & FINISHING WORKS, INC..........Concord, N. C.
LANE COTTON MILLS COMPANY..........New Orleans, La.
LANETT BLEACHERY & DYE WORKS..........West Point, Ga.
THE LAWRENCE PRINT WORKS, INC..........Lawrence, Mass.
LINCOLN BLEACHERY & DYE WORKS..........Lonsdale, R. I.
LOWELL BLEACHERY, INC..........St. Louis, Mo.
LOWELL BLEACHERY SOUTH..........Griffin, Ga.
ANDREW Y. MICHIE & SONS CO..........Philadelphia, Pa.
THE MILLVILLE MANUFACTURING CO..........Millville, N. J.
MOORESVILLE COTTON MILLS..........Mooresville, N. C.
MOUNT HOPE FINISHING COMPANY..........North Dighton, Mass.
NASHUA MANUFACTURING COMPANY..........Nashua, N. H.
NATIONAL DYEING & FINISHING CORPORATION....Los Angeles, Calif.
NEW BRAUNFELS TEXTILE MILLS..........New Braunfels, Texas
NORTH CAROLINA FINISHING COMPANY..........Salisbury, N. C.
THE ONEIDA BLEACHERY, INC..........New York Mills, N. Y.
PACIFIC MILLS..........Lyman, S. C.
PACOLET MANUFACTURING CO..........New Holland, Ga.
PEE DEE MILLS, INC..........Rockingham, N. C
PEPPERELL MANUFACTURING COMPANY..........Lindale, Ga.
PEPPERELL MANUFACTURING CO.—Lewiston Div..........Lewiston, Me.
PEPPERELL MANUFACTURING CO..........Opelika, Ala.
PILOT MILLS CO..........Raleigh, N. C.
PLYMOUTH FINISHING CO., INC..........Fall River, Mass.
PROVIDENCE D. B. & C. CO..........Providence, R. I.
RENFREW BLEACHERY—(Brandon Corp.)..........Travellers Rest, S. C.
REVOLUTION COTTON MILLS..........Greensboro, N. C.
RIEGEL TEXTILE CORPORATION—Ware Shoals Division,
Ware Shoals, S. C.
RIEGEL TEXTILE CORPORATION—Trion Division..........Trion, Ga.
ROANOKE MILLS COMPANY—Mill No. 1..........Roanoke Rapids, N. C.
ROBERTSON BLEACHERY & DYE WORKS, INC.........New Milford, Conn.
ROCK HILL PRINTING & FINISHING CO..........Rock Hill, S. C.
THE RUSSELL MFG. CO., INC..........Alexander City, Ala.
THE SALISBURY COTTON MILLS..........Salisbury, N. C.
SAYLES FINISHING PLANTS, INC..........Saylesville, R. I.
SAYLES-BILTMORE BLEACHERIES, INC..........Biltmore, N. C.
PHILIP L. SHEERR & SONS..........Frankford, Philadelphia, Pa.
SOUTHBRIDGE FINISHING COMPANY..........Southbridge, Mass.
SOUTHERN BLEACHERY & PRINT WORKS, INC..........Taylors, S. C.
THE SPRINGDALE FINISHING CO., INC..........Canton, Mass.
SPRINGS COTTON MILLS..........Lancaster, S. C.
STANDARD BLEACHERY & PRINTING CO., INC.........Carlton Hill, N. J.
J. L. STIFEL & SONS, INC..........Wheeling, W. Va.
STONEWALL COTTON MILLS..........Stonewall, Miss.
SUMMERDALE DYEING & FINISHING WORKS..........Holmesburg, Pa.
SUMTER TEXTILE MILLS..........Sumter, S. C.
SWIFT MANUFACTURING COMPANY..........Columbus, Ga.
TEXAS TEXTILE MILLS..........McKinney, Texas
TEXAS TEXTILE MILLS..........Waco, Texas
TEXTRON-SOUTHERN, INC.—Finishing Div..........Anderson, S. C.
THOMASTON COTTON MILLS..........Thomaston, Ga.
UNION BLEACHERY..........Greenville, S. C.
THE UNITED STATES FINISHING COMPANY..........Norwich, Conn.
THE UTICA WILLOWVALE BLEACHING CO..........Chadwicks, N. Y.
WHITE BROTHERS, INC..........Winchendon Springs, Mass.

URUGUAY

S. A. FABRICA URUGUAY DE ALPARGATAS..........Montevideo, Uruguay



WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

There's growing evidence, as a development of the new year in industrial relations, that where collective bargaining exists between employer and employee, the process of negotiating and adjusting differences is becoming easier, and less fraught with the suspicion and distrust rampant under the one-sided Wagner Act. This is credited as a gain for the Taft-Hartley Law. With knowledge of the rights of each defined and safeguarded by statute, both sides are dealing with the other with less hesitancy and tedious discussion. Equitable "rules of the game" are benefiting the unions as fully as employers are compensated by the law's equal protection.

Unions that are complying with the new law, and are not accustomed to the use of threat and bluster as a method of collective bargaining, are finding there's a better feeling and more candid approach to mutual problems and issues. There is less delay and less resort to legalistic safeguards. The whole process is being simplifed, with more effective procedures defined for taking up and disposing of differences as they may arise during the life of a contract.

Perhaps a new type of union leader, as was envisioned when the new law was passed, is being pushed to the front. The law leaves little room for the bludgeoning processes of the big union bosses, and calls more for skilled talent and real ability. Employers have a ready answer to the old threat and fiat—"we'll take it to N. L. R. B."

Out of the resistance and controversy centering on the new law, the question of competency of leaders is coming forward as the most pressing issue facing the unions. Non-compliance by leaders who cannot comply, or who oppose it as a "slave law," is stirring resentment and rebellion in the rank and file. Scores of local unions have pulled away from parent unions. Old-timers at the top, always re-elected to their jobs, are facing upheaval, and possibly ouster.

Some craft unions are making sweeping gains through formation and recognition of craft units in plants that have been organized in one big union. A. F. of L. is gaining most in the process.

N. L. R. B., through General Counsel Denham, has moved in on its first big house-cleaning job. It's taken jurisdiction over the entire building-construction industry, and will conduct 14,000 elections, involving 2,500,000 workers. Non-union workers and open shop contractors are not included. The board will act to prevent

Rayon Reports

pared Monthly by American Viscose Corporation, New York, N.Y. February, 1948

AVC Publishing Comprehensive New Handbook "Spinning Rayon Staple on the Cotton System"

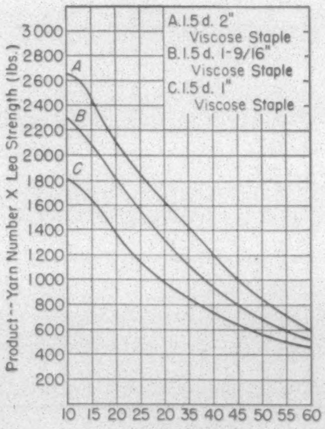
Based on long research and practical experiment in the American Viscose Corporation Textile Research Department, a new technical handbook entitled "Spinning Rayon Staple on the Cotton System" will soon be released by the Corporation.

Written by men intimately associated with the subject, the book has been compiled from information accumulated through years of exhaustive research work. Containing 144 pages, it tells of the development of rayon staple, describes its properties, and details the methods and techniques developed to help manufacturers achieve the best results from its use on the cotton system.

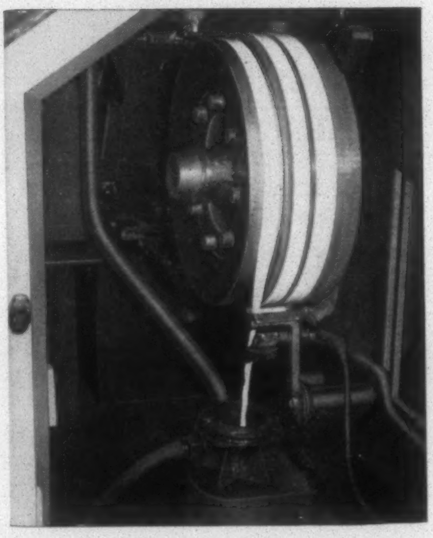
For example, it charts the effects that the various deniers and staple lengths of "Avisco" rayon staple can provide. Proper procedures for blending, tinting, picking, carding, drawing and spinning are analyzed, as are numerous other processing steps such as weaving, dyeing, printing.

Photographs, charts and tables accompanied by descriptive captions furnish a wealth of additional information, while a carefully detailed table of contents makes reference easy.

The book is offered free to technically qualified persons who request it on their business letterheads.



One of the 35 informative graphs from the handbook. It visualizes the effect of twist on the Lea-Skein Product of 20/1 yarns of Avisco viscose rayon staple.



Rayon tow entering a staple cutter, in the process of becoming Avisco rayon staple, as shown in the new handbook "Spinning Rayon Staple on the Cotton System."

RAYON 20 YEARS AGO

NEW YORK, Feb. 1928—Better processing of other textile fibers is resulting from knowledge gained from new rayon processing machinery, a trade magazine observes.

LEWISTOWN, PA., Feb. 1928—American Viscose announces it will build a $1,250,000 addition to its plant here this year.

MAKE USE OF *Avisco*® **4-PLY SERVICE**

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1. **FIBER RESEARCH**
2. **FABRIC DESIGN**
3. **FABRIC PRODUCTION**
4. **FABRIC FINISHING**

AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

excessive initiation fees, feather-bedding, secondary boycotts and jurisdictional disputes. Unless employers and the unions decide their disputes, the board will do so.

Tests of the Taft-Hartley Law are heading to the Supreme Court by a half dozen routes. The case against the Typographical Union is expected to be the first, and will bring up the whole issue of non-compliance. Communists are seeking safe ground to test the affidavit provision as a denial of "free speech." Various suits for damages are expected to go to the high court regardless of the outcome in lower courts.

A contract with a non-complying union is about as good as a Mexican divorce, in the opinion of N. L. R. B. officials. It's good so long as both sides are satisfied, but crumbles and totters with the first wildcat strike or work interruption. The employer cannot get N. L. R. B. help in enforcing it, and the union cannot file complaint against him, or compete with qualified unions in supervised elections.

Indictment of Philip Murray and C. I. O. on charges of violating the ban on spending union funds for political purposes is not expected to lead to conviction. The evidence is weak, and the indictment is brought under a weak link in the law. Acquittal this summer would open the flood gates to political spending by unions in the Fall campaign.

A wide-open split in A. F. of L. was averted at Miami through postponement of the move to set up a political league. Green still insists on it, but there are as many Republicans as Democrats among leaders, and many object to plumping for Truman on the sole issue of the new law.

C. I. O. and its P. A. C. have decided on all-out opposition to all Southern members of Congress with a sizable accumulation of "seniority." The intent is to oust Southerners as committee chairmen if the next Congress is Democratic, and replace them with Northern Democrats. The battle will be hottest in North and South Carolina, Georgia and Tennessee.

Mr. Truman has picked up a red hot issue in his "civil rights" message asking for F. E. P. C., anti-poll tax and other controversial legislation. His action is interpreted as a clever move to pick up votes of minorities in Northern states. Republicans are publicly praising the proposals and secretly hoping the Southern Democrats will kill them.

Southern Democrats are mad at Mr. Truman, but he is madder at them. He feels they are tearing to pieces his machinery for reelection, and they feel he is kicking them around because "they are in the bag from the start." Much of the screaming is due to general political frustration rather than to the race issue.

Sharp cut-backs in production are visualized by business interests if John Lewis goes through with an intimation of a coal strike in April. Many coal consuming industries are in partial idleness from zero weather and railroad troubles. A coal strike could provide even greater impediments.

PRODUCE QUALITY YARN

Armstrong's Cork Cots draft uniformly

You get better running work when you install Armstrong's Cork Cots because their seamless surface grips the yarn evenly. Cork, with its many six-sided cells, gives these cots high frictional properties. Cork also won't slick. That's why these cots draft uniformly, produce top-quality yarn consistently.

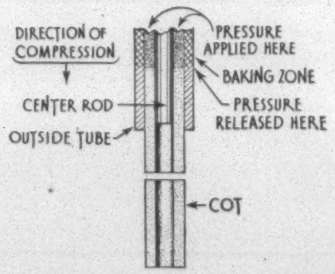
The high coefficient of friction eliminates eyebrowing, too. Armstrong's Cork Cots reduce clearer waste as much as 50%—and place it back on the clearer boards where it belongs. This means cleaner work and less clearer picking.

Armstrong's Cork Cots are also exceptionally resilient. They recover quickly from most laps or hard ends. They give you fewer ends down per thousand spindle hours, so your operators do less piecing up. They won't flow under roll weighting.

Low in first cost, Armstrong's Cork Cots have a long initial service life. When they do show wear, they can be rebuffed for 3 or 4 extra service lives.

Ask your Armstrong representative for samples, prices, and complete information. Or write today to Armstrong Cork Company, Textile Products Dept., 8202 Arch St., Lancaster, Pa.

EXTRUSION PROCESS PRODUCES SEAMLESS CORK COTS



Armstrong's Cork Cots have no structural weakness to cause premature breakdown. Each cot is uniform in density from inside to outside, from end to end. Each compresses evenly, spins stronger yarn, lasts longer.

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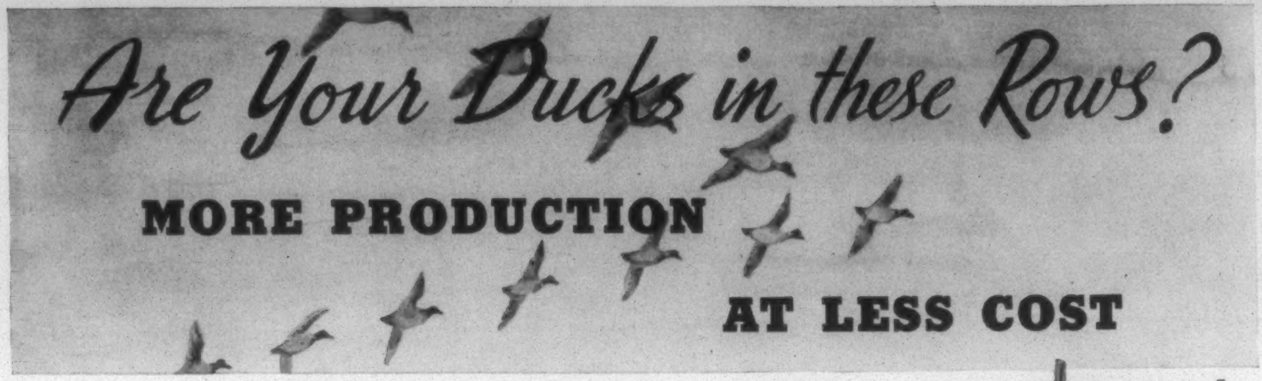
ARMSTRONG'S CORK COTS

ACCOTEX COTS • ACCOTEX APRONS



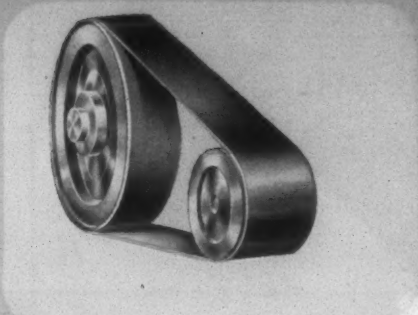
Here's how you can get lined up to meet present day requirements of volume textile production.

With the help of one of the South's oldest and most experienced sheet metal plants you can gear your preparatory machinery to modern competition. You can insure uninterupted production right from the start with precision made sheet metal parts. You can rely on quality products made and delivered with prompt dependable service. You can realize substantial savings.

Simply write, wire or phone

GASTONIA TEXTILE SHEET METAL WORKS, Inc.
GASTONIA, NORTH CAROLINA

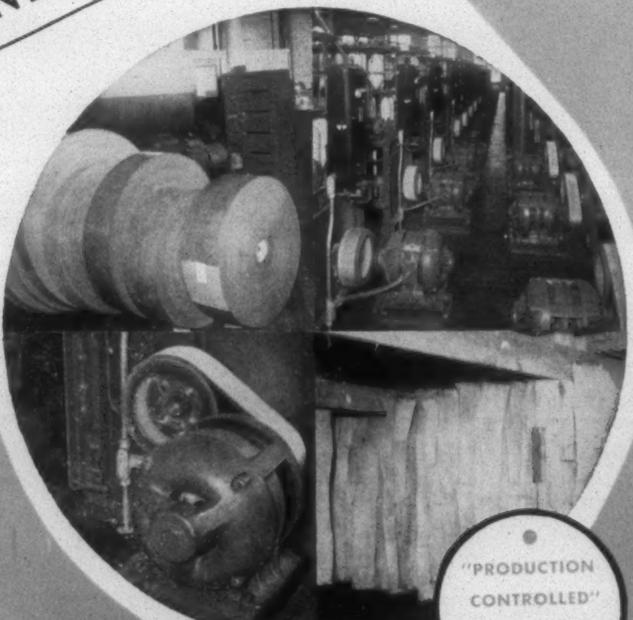
A SHEET METAL WORKS SERVING TEXTILE MILLS



long-life

PIVOTAN

AMERICA'S FINEST LEATHER BELTING



•POWER... DELIVERED!

Picking up power from the source and delivering it to a driven machine without too much loss along the way seems relatively simple. Most any belting can do a fair job for a while.

But if you're on the lookout for CONSTANT EFFICIENCY OVER A LONG PERIOD OF TIME, then consider first Southern Belting's *long-life, low-stretch, extra-grip* PIVOTAN. America's finest leather belting!

"PRODUCTION CONTROLLED" FROM HIDE TO BELT

Southern Belting Company - Atlanta

Manufacturers and Warehouse Distributors

Leather Belting	Rubber Belting	V-Belts and Sheaves	Fiber and Metal Pulleys	Rockwood-Southern Pivoted Motor Drives	Westinghouse Motors

WHAT OTHERS ARE SAYING

Design Protection

AT the end of last month it was again becoming apparent that the bill designed to protect originality of design in textiles will not become enacted. Known as the Hartley Textile Design Bill, HR, 2860, it was suddenly recalled to the House Judiciary Subcommittee on Patents, Trade Marks and Copyrights for further study after it had been favorably reported out by that group.

Representative Emanuel Celler of New York told *The Journal of Commerce* that in his opinion the legislation "already is dead." Behind this recall and the actions of Representative Celler can be seen the hand of the National Retail Dry Goods Association as well as garment manufacturing spokesmen. These segments of the textile and apparel trades obviously would oppose any legislation which would deprive them of the opportunity to secure cheap imitations of originally-designed, better quality fabrics.

Because of the known strength of these trades in matters congressional, it would seem apparent that the new bill is scheduled for the same fate as its predecessors in former session and will be permitted to die in committee. Even if reported out with considerable amendments, little chance for it is held by most observers.

Actually, it is difficult to see why the apparel and retail trades should oppose fabric design protection except for the immediate and somewhat petty fear that they would lose out on cheap imitations. As far as any other reasons for opposition are concerned it should not prove difficult for the various industry groups concerned to find agreement on most scores. Mill men and converters who have backed the legislation agree that the bill could be sufficiently amended so that it would satisfy most trades if retailers and cutters should decide to go along.

There seems to be little doubt that no protection exists today for original fabric designs. Any attorney can easily demonstrate this with court decisions on record. This is one of the few American industries, therefore, in which originality of design or inventiveness has no legal safeguard. It has often resulted in new, good fabrics being quickly submerged under a flood of cheaper imitations to the detriment of the entire style industry in this country.

The feeling by retailers that they may be involved in needless lawsuits is entirely groundless. If the retailer conducts his business properly and cleanly he is free from bother unless and until he has been notified in writing that a court has already passed on the conflicting designs and has decided that he is selling an infringing design. Representative Celler's statement that "with the exception of the copyright owners no one would dare to buy any fabric without risking lawsuit" does not hold water in the fact of this provision.

Another charge which has been made against the proposed legislation is that it would tend to foster monopolies by confining fabric designs in a few hands. This argument is specious since patenting has worked just the opposite in most industrial fields. Safeguarding of original designs would put a premium upon ingenuity and will lead to a much greater development of new and fresh design. It would permit many mills and converters to plan long runs of a given design with the secure knowledge that these will not turn up quickly in much cheaper form on lower grade constructions and in turn will mean that the expanded output would permit lower prices.—*Journal of Commerce,* New York City.

Plain Language Best

IN offices and between widely separated businesses, there is a factor which eats time, namely, communication between people, and in most offices and in a great many industries that communication is effected through the written word.

Plain language is a time saver — plain language whether written or spoken. We all do a lot of reading every day. Think how much time we would save ourselves and others if we took a few more pains to write in plain language that inter-office memo, that letter to a customer, that letter to the head of another industry, etc.

The thing to do is to simplify your writing style. This will save reading time. Saving reading time is like putting money in the bank, because saved time means more time for production.

A large vocabulary doesn't necessarily produce in its owner the means to write plain, readable English. It is wrong to believe that merely to understand words is the key to understanding the best method of speaking and writing plain English.

Words must not be learned as vocabulary builders, but how each word fits the context of a piece of writing. That's the way to understand words. Simple writing, however, does not mean elimination of big words. The project to keep in mind when writing a letter or a memorandum is not how to simplify words but how to simplify your context. The simplified context means less reading time for your reader. Practice it with thought—*The Slater News,* Slater (S. C.) Mfg. Co.

The Wages Of Sin

THE ever-mounting burden of taxes which, if permitted to grow unabated, will threaten the very foundation of the American economy, cannot be blamed entirely upon legislators.

It is true that they vote for the taxes, but it is also true that it is the taxpayers who elect the legislators.

Just so long as taxpayers elect high-tax legislators, they will be punished by higher taxes. When the final day of reckoning arrives, they will have only themselves to blame, as illustrated in a sermon preached by a Presbyterian minister in the highlands of Scotland. Said he:

"And in that day the domned in muckle hell will look up frae amang the flames and stenches of the pit and stretch forth their arms and cry to the Laird in Heaven whur he sits on his gowden throne in His infinite mercy, and wail, 'Laird, Laird, we didna ken!' And the Laird will look down on the domned in His infinite mercy and say, 'Well, ye ken now'." — *Richmond* (Va.) *Times-Dispatch.*

Capitalism Vs. Socialism

THE inherent vice of Capitalism is the unequal sharing of blessings, while the inherent virtue of Socialism is the equal sharing of miseries. — *Winston Churchill.*

Then, as now, COLOR sold textiles

In 18th century Europe, tradesmen offered their wares to madame during her morning toilette. Among the first to be admitted were sellers of colored fabrics from Lyons, Spitalfields and the Far East. Then, as now, color sold textiles.

Franklin Process

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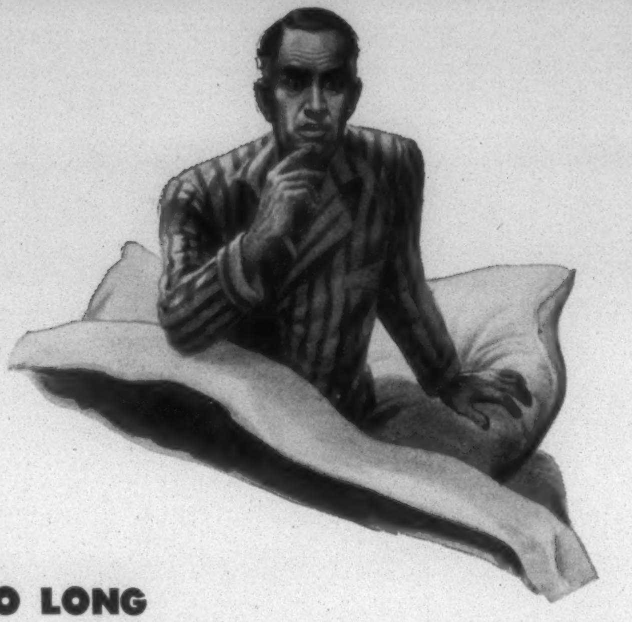

WHO ALMOST SLEPT TOO LONG

T. M. Stanton* was having a nightmare. For months he'd been preoccupied with the production problems of Empire Gadgets, Inc. So preoccupied, he'd even half-admitted to himself that he was devoting far less thought to national problems than a leading citizen should. But the urgency of his immediate interests kept shoving these concerns into his subconscious mind. Now they were torturing his sleep.

"T. M., old boy," one spectre was saying, "how would you like a nice black depression to come along and swallow up your whole company?" And a green-eyed ogre leered, "While you're neglecting your free-enterprise system, we're moving in with *another* system!"

Stanton's body lurched. "No!" he thundered. Awakened, he scratched his head, murmuring, "Gad, what a dream! H-m-m—wonder what sort of contribution I ought to be making . . ."

Here's Something, Mr. President, You Ought to Do Right Away!

Check up on the status of the Payroll Savings Plan in your company. By making U. S. Savings Bonds easily available to your employees "on the installment plan," it benefits not only the employees but your business and the nation as well! Here's how:

(1) The Payroll Savings Plan builds financial security for each participant. The Bonds pay $4 at maturity for every $3 invested.

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(3) The Plan helps to spread the national debt and thus helps secure your business future. How this works is clearly and briefly described in the free brochure shown below.

Why Executive Backing Is Vital

Employees still want the benefits of the Payroll Savings Plan. In fact, they *need* the P. S. P., because banks don't sell Bonds on a partial-payment plan—which is the way most workers prefer to buy them. But war-time emotional appeals are gone. Human nature being what it is, the success of the Plan in your company is liable to dwindle unless a responsible executive *keeps promoting it.*

So—today—*check up* on the status of the Payroll Savings Plan in your company. *Act* on your responsibility to see that it is vigorously maintained.

The State Director will gladly help.

Be sure to read this! *"The National Debt and You," a 12-page brochure, brings you the views of W. Randolph Burgess, Vice Chairman of the Board of The National City Bank of New York—and of Clarence Francis, Chairman of the Board, General Foods Corporation. Request your copy from the Treasury Department's State Director, Savings Bonds Division.*

**This one is fictitious—but it might be any corporation president.*

The Treasury Department acknowledges with appreciation the publication of this message by

textile bulletin

This is an official U. S. Treasury advertisement prepared under the auspices of the Treasury Department and The Advertising Council.

HYMOLON "K"

100% ACTIVE

Synthetic Detergent

STABLE

HYMOLON K is stable in hard water, acids and alkalis and is compatible with soap. It prevents scum formation and promotes more level dyeing. Hymolon K is a *liquid* detergent and as such is preferred for ease of handling and use.

ECONOMICAL

HYMOLON K is 100% active, contains no water, salts or cheap alkalies, and shows about 4 times the scouring of a good soap. Accordingly, there is less material to ship and handle. Hymolon K economically combines in one product good wetting-out and excellent detergency. The concentration required varies with the type of operation, usually 0.1 to 0.4% on the weight of the goods.

VERSATILE

HYMOLON K is recommended for scouring and dyeing operations for all types of textile fibers; for unsurpassed detergency of all forms of woolens; and for the kier boiling of cotton. It gives a heavy, continuous, foamy bath and is especially useful in cleaning operations where emulsification and dispersion of spinning waxes or oils are of importance.

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Cannot Serve Two Masters

We doubt that any group of politicians have ever been in a worse fix than those of the Southern states at the present moment.

President Truman and his administration control patronage and are in position to dole out many political plums.

Southern politicians know that unless they fall in line with the administration plans for forcing social equality with Negroes upon the people of the South, they will be in disfavor and need not hope for any good jobs.

On the other hand they know that the people of the South deeply resent the efforts of Harry Truman to capture the Negro vote of the North by selling the South down the river.

Many of the politicians would be willing to help sell the South down the river, if by doing so they could obtain political favors from the administration, but the white people of the South are now in dead earnest about this effort to eliminate segregation and to force social equality with Negroes upon them and the few men who dare champion the present effort of the Truman administration need not hope to be elected to any office or have any political future in their home state.

They know that the Negroes of the South are constantly being given better schools and more advantages and that they prefer to have their own schools, churches, moving pictures, etc., and much prefer to associate with members of their own race.

Thinking men doubt that the Negroes of the North have any strong desire for association with whites and believe that the movement for social equality arises from the desire of white politicians in the North to acquire the votes of Negro sections of the large cities.

Politicians of the South are between the proverbial "Devil and the deep blue sea" and some are trying to find some way to "carry water on both shoulders."

The general opinion among the people of the South is that if enforced equality with Negroes is to be placed upon them, it is best for it to be done by the Republicans rather than by the party with which they have been voting for more than a generation.

That sentiment is growing rapidly and can and should grow to the point that it will mean the defeat of Harry Truman.

Many are looking with favor upon holding a Southern Democratic Convention and favor the nomination for President of Harry Byrd of Virginia or some man of equal character and standing.

It is well known that most people in the North are just as much opposed to social equality with Negroes as people in the South and many would vote for the candidate nominated by the Southern Democratic Convention.

It is entirely conceivable that in several of the Northern states there would be enough votes for the nominee of the Southern Democratic Convention to change the results.

There have been race riots in New York, Detroit and other places in protest against the movement of Negroes into white sections, and people who are opposed to Negroes living in adjoining houses are not likely to favor the election of a man who has declared himself in favor of the elimination of all segregation laws.

Southern politicians are trying to find some way of easing the situation so they can continue to support the Truman administration and thereby receive its political plums.

We believe that the time has come for an open break and can see nothing to be gained by supporting Truman and thereby yielding to his demands for social equality with Negroes.

We know of nothing which can be said in Truman's favor other than that he is better than Henry Wallace.

Senator Taft, as a member of the Senate Committee on Labor, recently voted against approval of the F. E. P. C. law which would force all employers, both North and South, to employ Negroes and allow them to work alongside white people.

Senator Taft gave as the reason for his vote that the F. E. P. C. would not help the Negro but would create antagonism and ill will for him.

Those who do not wish to see the day come when the people of the South will be forced to permit Negroes to use the hotels and restaurants and to see white girls forced to work side by side with Negro men, should not hesitate to let the politicians and so-called political leaders know how they feel.

Every loyal son and daughter of the South should say: "To hell with the Democratic Party if it seeks to force social equality with Negroes upon the people of the South."

A Southern Democratic Convention can be held and Southerners can be given a chance to vote for a man like Harry Byrd.

North Carolina and other Southern states refused to ratify the Constitution of the United States until a Bill of Rights containing the following sections was agreed upon:

IX—The enumeration in the Constitution of certain rights shall not be construed to deny or disparage others retained by the people.

X—The powers not delegated to the United States by the Constitution, or prohibited to it by the states, are reserved to the states respectively or to the people.

No Southern state has ever yielded to the Federal Government any of the powers which it reserved under the above sections of the Bill of Rights and all of them still have the right to make regulations relative to the conduct and behavior of people within their borders.

Abraham Lincoln was opposed to slavery but with his rare gift of understanding and common sense did not believe that social equality would benefit Negroes.

During his debate with Douglas at Champaign, Ill., on Sept. 18, 1858, Abraham Lincoln said:

> I will say, then, that I am not, nor ever have been in favor of bringing about in any way the social and political equality of the white and black races; that I am not, nor ever have been, in favor of making voters or jurors of Negroes, nor of qualifying them to hold office, nor to intermarry with white people; and I will say in addition to this that there is a physical difference between the white and black races which I believe will forever forbid the two races living together on terms of social and political equality. And inasmuch as they cannot so live, while they do remain together there must be the position of superior and inferior, and I, as much as any other man, am in favor of having the superior position assigned to the white race.

Like most Southerners, we are interested in the welfare of the Negroes of the South and realize that they have not always had fair treatment but that most of the mistreatment was in days long since passed.

We are not discussing here whether or not the Negro race is inferior to the white race but we do know that segregation is best for both races.

As Abraham Lincoln said, there is a physical difference between the white and black races which will ever forbid them from living together on terms of social and political equality.

Eighty-three years have passed since the Civil War and yet there has been no appreciable amalgamation nor will there ever be.

We can record only two white men who ever married Negro women and that is most significant to us.

It is true that a few white women marry Negro men but also true that such unions seldom last long and only in rare cases do they live out normal married lives.

Most of those who seek the elimination of segregation have little interest in the welfare of the Negroes and are inspired primarily by a desire to force upon the people of the South things which they know will be repugnant to them.

Harry Truman, born and raised in Missouri, where there is a large Negro population, is fully aware of the feeling of the people of the South.

Having been told that there is a large Negro vote in several of the doubtful states of the North, he is willing to make a movement toward forcing social equality with Negroes upon the people of the South in order to secure that vote.

Our people have no obligation to Harry Truman and in view of his willingness to sacrifice them, should hold a Southern Democratic Convention and nominate for President Harry Byrd or some man of his type.

If such a movement results in the election of a Republican President, the South will be no worse off than if there is elected a man who has shown a willingness to "sell the South down the river" in order to acquire votes.

Oh My Aching Back!

[Reprint of Ficklen cartoon]

TEXTILE INDUSTRY SCHEDULE

March 7-9—Ninth annual **SOUTHERN SAFETY CONFERENCE,** Birmingham, Ala.

March 13—SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Highland Country Club, LaGrange, Ga.

March 15-19—AMERICAN SOCIETY OF TOOL ENGINEERS' INDUSTRIAL EXPOSITION, Public Auditorium, Cleveland, Ohio.

March 20—Spring meeting, **TEXTILE OPERATING EXECUTIVES OF GEORGIA,** Chemistry Building, Georgia School of Technology, Atlanta.

April 2-3—Annual convention, **ALABAMA COTTON MANUFACTURERS ASSOCIATION,** Hotel Beuna Vista, Biloxi, Miss.

April 3—PIEDMONT SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Robert E. Lee Hotel, Winston-Salem, N. C.

April 3—SOUTH CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION, Parker High School, Greenville, S. C.

April 5-8—Third **SOUTHERN MACHINERY AND METALS EXPOSITION,** Atlanta (Ga.) Municipal Auditorium.

April 10—PIEDMONT DIVISION, SOUTHERN TEXTILE ASSOCIATION (includes former Gaston County Division), Charlotte, N. C.

April 17—NORTHERN NORTH CAROLINA-VIRGINIA DIVISION, SOUTHERN TEXTILE ASSOCIATION, site of meeting to be selected.

April 22-24—Annual convention, **AMERICAN COTTON MANUFACTURERS ASSOCIATION,** Roosevelt Hotel, New Orleans, La.

April 24—EASTERN CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION, N. C. State College School of Textiles, Raleigh.

April 29-May 1—Annual convention, **AMERICAN COTTON SHIPPERS ASSOCIATION,** Dallas, Tex.

May 3-7—INTERNATIONAL EXPOSITION OF TEXTILE MACHINERY, EQUIPMENT AND SUPPLIES, 71st Regiment Armory, 34th Street at Park Avenue, New York City.

May 5-7—Annual convention, **COTTON MANUFACTURERS ASSOCIATION OF GEORGIA,** Sheraton-Plaza and Princess Issena Hotels, Daytona Beach, Fla.

May 10-14—Third annual **NATIONAL TEXTILE SEMINAR,** Shawnee Inn, Shawnee-on-Delaware, Pa.

May 13-15—Annual convention, **SOUTHERN TEXTILE ASSOCIATION,** Ocean Forest Hotel, Myrtle Beach, S. C.

May 13-16—Annual outing, **CAROLINA YARN ASSOCIATION,** Carolina Hotel, Pinehurst, N. C.

May 17-22—NATIONAL COTTON WEEK.

May 20-21—Annual meeting, **SOCIETY OF PLASTICS INDUSTRY,** Atlantic City, N. J.

May 27-29—Annual convention, **TUFTED TEXTILE MANUFACTURERS ASSOCIATION,** Sheraton-Plaza Hotel, Daytona Beach, Fla.

June 18—PIEDMONT SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Ocean Forest Hotel, Myrtle Beach, S. C.

July 22-24—Ninth annual **COTTON RESEARCH CONGRESS,** Dallas, Tex.

Sept. 27-Oct. 2—Third **NATIONAL PLASTICS EXPOSITION,** Grand Central Palace, New York, N. Y.

Oct. 4-9—15th **SOUTHERN TEXTILE EXHIBITION,** Textile Hall, Greenville, S. C.

Oct. 20-23—Annual convention, **AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS,** Sheraton-Bon Air Hotel, Augusta, Ga.

Medley Drawing is in the Textile Spotlight for 1948!

Mills throughout the industry are turning to Medley Drawing. Day in and day out Medley Drawing Frames are turning out a more uniform sliver—they are reducing ends down to a minimum—they are helping mills meet production schedules by increasing efficiency.

Mill men who are faced with increased production schedules are checking operations in each department—carefully. Many who find the all important drawing process slowing production because of outmoded equipment are turning to Medley Drawing Frames. They praise Medley's "plus-features"—the sealed-in ball bearing top rolls, permanently lubricated—the noise-reducing helical gear drive. They like Medley Frames because they can be adjusted to draw any fiber—cotton, wool, synthetics, ramie, in staple lengths from 5/8 inch to 13 inches.

Yes sir, Medley Drawing is really in the 1948 spotlight. If production is a problem in your mill—call or write Medley today for the counsel of a trained textile or mechanical engineer.

It's Medley in '48

It's a good thing to include in your plans for '48. Medley can supply new frames equipped with 5 roll, 8 ends drawing, or 4 roll, 6 ends conventional, each featuring the Medley sealed-in ball bearing top roll, the quiet helical gear drive—or your present frames can be changed over to this more efficient drawing. A card or a call will get you the whole story.

The MEDLEY System, Inc.

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Medley Manufacturing Co., Columbus, Ga. • Gastonia Roller, Flyer & Spindle Co., Gastonia, N. C. • Allan Textile Machine Co., Pawtucket, R. I.

textile bulletin

VOL. 74 FEBRUARY, 1948 NO. 2

Law Suits Affecting The Textile Industry

By LEO T. PARKER, Attorney

RECENTLY, a reader wrote a letter containing an interesting legal question: "We have had a few controversies with purchasers who sign contracts to buy large quantities of textile materials, and then later refuse to accept and pay for the goods they ordered. What we want to know is whether we can attach and have the county authorities keep these purchasers from disposing of their assets while the suit is in court?"

This is a good question because very frequently suits of this kind are appealed from one court to another and several years pass before a final decision is rendered. According to a recent higher court attachment preceeding can be filed against a purchaser who breached a sale contract (1) if the seller sues for a stated sum of money; or (2) the case is adjudicated in a lower court. But if the amount of damages must be decided by a jury no attachment will be granted until the jury renders its verdict allowing the seller stipulated damages.

See Friedman v. Mandelbaum, 51 Atl. (2nd) 260, reported June, 1947, a seller sued a purchaser upon an alleged breach of contract for the manufacture of 100,000 yards of cloth, the claim arising out of loss of contemplated profits upon the yardage not yet manufactured. The seller asked the court to immediately issue an attachment of the purchaser's assets. The court refused to grant the attachment because the seller failed to sue the purchaser for a definite sum of money as damages. This court said: "The profit in any business transaction necessarily depends upon many variable and uncertain factors and attachment will not lie where the damages flowing from a breach of the contract are to be determined by a jury."

Patent Refused

Modern higher courts consistently hold that all patent claims and applications for "indefinite" inventions are void. For instance, in Application of Hill, 161 Fed. (2nd) 367, it was shown that an inventor filed an application for a patent on a dye bath for textiles comprising an emulsion of a water-immiscible pigmented lacquer distributed in a continuous aqueous phase, the binder of the lacquer comprising a carbamide formaldehyde resin in organic solvents. The Court of Customs and Patent Appeals refused to allow the patent, and said:

"Had appellant (inventor) limited his claims to 'carbamide formaldehyde resin' in all probability they would have been allowed. Instead it may be noted that the claims call for 'a carbamide formaldehyde resin' and if the recital in the specification heretofore quoted does not accurately define 'carbamide resins' the claims must be held to be indefinite."

Design Patent Law

Design patents protect ornamental designs *only*. Hence a mechanical patent gives better protection to an invention than a design patent. In Belding Heminway Co. v. Future Fashions, Inc., 143 Fed. (2nd) 216, the higher court refused to grant an injunction against an alleged infringer of a design patent on cotton dress material, and said: "Such fugitive popularity as fashions in dress are apt to enjoy, are often the result of caprice; it is impossible for even the most adept students of the market to tell in advance which ones will succeed, or whether any one will. In the absence of evidence that the design, which happened to hit the public fancy, was a wide departure from the past, we should not feel justified in holding the patent valid merely because of its grant."

Must Prove Breach

According to a recent higher court no purchaser may recover damages from a seller for breach of a sale contract unless definite proof is given that the purchaser fulfilled his obligations and the seller breached his obligations. For illustration, in Joseph Wasserman v. Broadalbin Knitting Co., 72 N. E. (2nd) 11, a purchaser named Mayfair Novelty Co. sued the Broadalbin Knitting Co. for damages for alleged failure of the latter to deliver merchandise under a written contract.

The testimony showed facts, as follows: In October the Broadalbin Knitting Co. contracted to sell 10,000 dozen spring colored sweaters at $6.625 per dozen to the purchaser "size and color assortments to be given from week to week. Delivery to April 1." The purchaser acknowledged the letter and stated "We agree to take in all goods on this order by April 1, and also assume financial responsibility for the value of any portion of the yarn which you have purchased for this order, and which for any reason on our part remains undelivered by April 1." The higher court refused to allow the purchaser any damages because it failed to prove that it had fulfilled its assumed obligations and that the Broadalbin Knitting Co. had breached its contract.

May Modify

Recently, the Supreme Court of the United States held that a manufacturer cannot use a trade mark which caused the public to believe that the goods contains certain ingredients which actually it does not contain. But this court indicated that the manufacturer may modify the trade mark which does *not* deceive the public, and continue to use it. For example, in Jacob Seigel Co. v. Federal Trade Commission, 66 S. Co. 758, the testimony showed facts, as follows: The alpaca and vicuna are animals whose fleece is used in the manufacture of fabrics. A manufacturer of overcoats and topcoats marketed them under the name Alpacuna. They contain alpaca, mohair, wool, and cotton but no vicuna.

The Federal Trade Commission held that the manufacturer misrepresented that the coats contained imported angora and guanaco. It also held that the name "Alpacuna" is deceptive and misleading because it induces the erroneous belief that the coats contain vicuna. The Supreme Court of the United States upheld the decision of the Federal Trade Commission except that it held that the manufacturer could use the name "Alpacuna" if he informed the public that the coats contained no imported angora and guanaco, nor vicuna.

Trade Mark Law

Modern higher courts consistently hold that no person may unfairly adopt and use a trade name or trade mark that will cause financial loss to the original user, or that will confuse the public. For example, in California Piece Dye Works v. California Hand Prints, Inc., 159 Fed. (2nd) 371, it was shown that a manufacturer registered in the United States Patent Office its trade mark "California Hand Prints," used for tablecloths, luncheon sets, towels, drapery and upholstery fabrics.

Soon afterward another company, the California Dye Works, started using the trade mark "Color-fornia" on the same type of goods. The federal court held that the latter trade mark could not be used by the California Dye Works, saying: "The two marks here involved are substantially the same in sound and appearance; and, if such use is continued, will likely cause further confusion in the mind of the public."

New Law

In the past all higher courts have held that manufacturers or sellers of merchandise in different classifications may use the identical trade mark. However, this usual law was changed in the new case of Hanson v. Triangle Publications, Inc., 163 Fed. (2nd) 74. The testimony showed facts, as follows: The Triangle Publications, Inc., is the publisher of *Seventeen,* a magazine of fashions and other interests for girls of high school age. It began publication of the magazine in 1944 and had the name "Seventeen" registered in the Patent Office as a trade mark. Later a manufacturer of dresses for teen-age girls, named and labeled garments "Seventeen for the Junior Teens." The publisher sued the clothing manufacturer claimnig that infringement and unfair competition result from use of the word "Seventeen" in the tradename and label of "Seventeen for the Junior Teens," and that the public will be led to believe that the manufacturer's dresses have been advertised in or otherwise endorsed or sponsored by the magazine.

The higher court ordered the manufacturer to discontinue use of its trade mark and label having *as any part* the word "Seventeen," saying: "The use of another's mark or name, even in a non-competitive field, where the object of the user is to trade on the other's reputation and good will, or where that necessarily will be the result, may constitute unfair competition."

Not Affixed

According to a recent higher court no manufacturer may claim ownership of a trade mark not affixed to the goods, or containers of the goods, which the mark represents. See Cole of California, Inc., v. Grayson Shops, Inc., 165 Pac. (2nd) 963, where a manufacturer of women's and children's wearing apparel in the Los Angeles area used the word "Swooner" as a trade mark and invested some $15,000 in its national advertising campaign. The manufacturer filed in the office of the Secretary of State of the state of California for a trade mark for the word "Swooner." This application was filed April 1, 1944, and the trade mark was issued four days later.

On March 3, 1944, a manufacturer of bobby socks which operates 26 stores on the Pacific coast first used the word "Swooner" in connection with the sale of bobby socks. Upon that occasion there was placed in windows cardboard signs stating "Swooner Anklet Sox, 4 pairs for $1.00." Hence, this latter manufacturer began using but not affixing the trade mark "Swooner" before the other manufacturer had applied for registration of the mark. The Federal Court held that the latter manufacturer which had not affixed the mark to its goods could not continue using the mark "Swooner," saying: "In connection with this March 3 display the defendant did not affix or attach any sign, card, label or other matter to any of the bobby socks offered for sale by it."

Unfair Competition

Although neither user of a trade mark has applied for registration of the mark, the *first* one to adopt it may prevent use of it by all others in the territory where the mark is used by the originator. See Eastern Columbia, Inc., v. Waldman, 181 Pac. (2nd) 865, where a corporation sold furniture and wearing apparel under the tradename of "Eastern-Columbia." Another company started to use the tradename "Western Columbia."

The lower court held that the use of the latter name is "misleading,, confusing and deceptive to the public generally." The higher court approved the verdict and ordered that use of the tradename "Western Columbia" be discontinued. This court said: "The use of the words 'Western Columbia' will confuse and deceive the public. Under these circumstances it is difficult to find any justification for permitting defendant to use those words at all in his business whether alone or in conjunction with other words."

Prevents Dissolution

A majority of higher courts held that minority holders can prevent dissolution of a corporation in cases where there is (1) fraud, or (2) a "freezing out" of minority holders with the purpose of continuing the business for the benefit of the majority holders, or (3) where the dissolution is a consolidation of two or more corporations contrary to law, or (4) a sale of assets to the majority holders for an inadequate price. This law is applicable although state laws clearly authorize voluntary dissolution of a corporation upon vote of the majority stockholders.

For illustration, in Weisbecker v. Hosiery Patents, 51 Atl.

811, it was shown that one Weisbecker was the inventor of improvements on hosiery knitting machinery. To obtain funds for the procurement of several patents upon his inventions and for developing, exploiting and marketing them, the inventor assigned a two-thirds interest in his inventions to two brothers named Subin. Later a corporation was organized known as Hosiery Patents, Inc., and the patents were assigned to it. The inventor received ten shares of stock and Subin brothers ten shares each. A few years later the Subin brothers voted their stock in favor a resolution adopted by the board of directors proposing the dissolution of the corporation and the liquidation of its assets. The patents were sold at an auction. The inventor bid $20,000 but a corporation controlled by Subin, bid $20,100 and thereby secured the patents. The proceedure was authorized by state laws. In subsequent litigation the Supreme Court held that the inventor could cancel or set aside both the sale of assets of Hosiery Patents, Inc., and sale of the patents if a jury decided that the corporation was dissolved by Subin brothers to "squeeze" out the inventor.

Labor Dispute

According to a recent higher court the only purpose that an employer can have in showing partiality to a labor union is to assist it to become the representive of his employees for the purpose of collective bargaining or to forestall the organizational efforts of some rival union. In National Labor Relations Board v. Winona Knitting Mills, Inc., 163 Fed. (2nd) 156, the testimony showed that the Winona Knitting Mills had shown partiality and granted favors to an independent labor union. The National Labor Relations Board restrained the company from recognizing independent union as representative of its employees unless and until certified by the Board. The higher court approved this restraining order of the National Labor Relations Board.

Dress Irritated

According to a recent higher court there is an implied warranty on the part of the seller and manufacturer that the article sold is free from hidden defects that would impair the suitability and fitness of the goods for its intended use. For example, in Marra v. Jones Co., 170 S. W. (2nd) 441, it was shown that one Marra purchased for her own use a wine colored satin blouse sold by Jones Co. and paid $1.95 for it. Marra wore the blouse to her work as a clerk where she was employed from 8 a. m. to 6 p. m. In the afternoon of that day she noticed an itching sensation around her neck and arms. She did not wear the blouse again, but on the next day every part of her body where the blouse had made direct contact was a solid mass of red pimples. Blisters appeared and they burst, others formed, and infection spread where the blisters came in contact with her skin.

Mara sued the Jones Co. for damages and her physician testified that the cause of the dermatitis and irritation was from the garment she wore. Also, a chemist testified that he made an analysis of a sample of the blouse and found the cloth to contain a benzidine dye and a trace of iron, some tin oxide, and about 15 milligrams of lead per square inch, and arsenic of 1-1000 of one milligram per square inch. The jury awarded Marra $3,000 damages, saying: "According to the English law (and also under the American Sales Act) the seller impliedly warrants the merchantable character of the goods which he sells." For comparison, see Colchord Co. v. Loy-Wilson Co., 110 S. W. 630.

Patent Held Valid

A patent may be obtained on any new device or method of doing something. For example, in Kenyon v. Platt, 152 Fed. (2nd) 1006, a patent was awarded an inventor on a method of dyeing fabrics containing organic derivative of cellulose yarns. The method which was patented comprised immersing the fabric in a heated bath containing dyestuff. After the fabric is immersed for a short time it is removed from the bath and the fabric is kept at the same temperature as the temperature of the heated dye bath *while it is out of the dye bath* until dyeing is completed.

Vibrating Machine

It is well established law that although a textile company has operated a mill in the same location for many years, it cannot install new machines or equipment closer to private dwellings, or more annoying than machines it has previously used. For example, in Finn v. Pasquini, 49 Atl. (2nd) 858, it was shown that a company has been in the same location for 25 years. The company decided to install a machine which "makes a noise of a different character, not unlike that caused by the operation of a sawmill."

A nearby property owner filed suit and ask the court to grant an injunction to prevent the company from installing the new machine on the grounds that its operation would be a "nuisance." The higher court refused to grant the injunction but indicated that although the company could continue using the same equipment it had previously used, yet if the new machine proved to be a "nuisance" to persons who lived in nearby homes, the lower court must issue an injunction against its use. The higher court also indicated that until the testimony proved that the machine was a nuisance the company could operate it.

Viewing The Social Structure Of Man

Last of the "Miasmic Minds" Series by W. M. McLAURINE

WHEN Dr. Arnold Toynbee, famous world historian and lecturer, was in the United States last March, he delivered a series of lectures, "Encounters Between Civilizations," to the students, faculty and friends of Bryn Mawr, in which he stated, among many observations, one or two ideas that seem fitting with which to begin this summary.

History is moving with 20th Century acceleration, due to the speed of science and its application to the things of life.

This is not a record of "baffling immensity and enigmatic gloom," according to Spengler, since he, Toynbee, has discovered (1) that civilizations are not things-in-themselves, but simply the *relations that exist* between men living in a given society at a given moment of time; (2) that the goal of history, however dimly sensed in human terms, is the Kingdom of God.

Both of these statements are challenges to all groups of society. They are more specifically challenges to every member who is a part of the group.

He made another statement that is proper to be recorded in a business magazine, because its implication includes all peoples. He estimates that it required about 300,000 years for primitive man to reach what may be termed the lowest form of civilization which was about 6,000 years ago, according to available or discernible history.

Out of the millions who have attempted to advance or ascend the heights of that ever-changing evanescent peak toward, what Toynbee calls the Kingdom of God, there have been 26 civilizations.

Only five of these remain active: (1) Western civilization (Western Europe, the British Commonwealth, the United States and Latin America); (2) Orthodox Christian civilization (Russia and the Orthodox sections of Southeastern Europe); (3) Islamic civilization; (4) Hindu civilization; (5) Far Eastern civilization (China, Korea, Japan). Of these five, four show signs of imminent exhaustion and the fifth, Western civilization, is growing dizzy.

This statement does not imply that any immediate collapse is imminent, first because civilizations do not rise and decline in decades, they require centuries, as Mr. Toynbee so aptly records. There is ample evidence that they do rise, decline and die. They worshipped things and forgot people. There are evidences of disease in the existing civilizations. Proof is so evident that it does not need to be deduced.

Every civilization that has existed has been strong, powerful and boastful and unmindful of the germs of death that steadily undermined it and destroyed it. Yet they died and the evidence is undisputable. Others are now sick and available for observation.

England once and for a long period was the international banker for the world, also the insignia for law and order. Only recently she sent a signal to this nation and to the world that her impotence was being recognized. Greece and Turkey needed men and money, and while it was primarily her function to supply this need, she was unable, the United States would greatly favor England and the world by meeting this need. Our nation met the need and will meet other similar needs as and when they arise, because civilization is at stake and this nation is the last stronghold.

This position is not, or should not be, a policy for trade or exploitation. It is a policy out of which could come, should come a constructive understanding of correct ethical relationships between men living in these groups of society at this time. Properly interpreted, it should represent man's interest in his fellow man. Such an act ethically interpreted is good not only for this nation, Greece, Turkey and England, but could give to Russia a subjective consciousness that would orient her thinking at the peace table. All of these statements are capable of rational interpretations but space forbids.

Only recently in the International Sunday School lessons, there is a modern story which happened nearly 980 B. C.

Solomon is reputed to have been a very wise man. In his early days, he was a devout religionist. He built the temple at Jerusalem. He did many wonderful things. He forgot his religion; he forgot his people; he allowed idols to be erected; he grafted and oppressed his people. His son, Rehoboam, grew up in a pagan and dissolute society; he inherited the throne as king after his father died. During Solomon's reign he had a Secretary of Labor, Jeroboam, the son of Nebat. He begged Solomon to treat his people fair. Solomon frightened him so that he ran away to Egypt for his life.

When Rehoboam came to the throne, he oppressed the people more than his father. He loved things and the pleasures of his group. The people rebelled and sent for Jeroboam. He came home to represent labor and to save them.

Labor and capital met at Shechem to try to dissolve their difficulties. They met in groups. They argued, they could not agree. They split the kingdom and destroyed the only physical and united nation this group of people ever had.

Without carrying this historic analogy too far, another interesting event should be recorded that, in order to keep the labor group from going back to Jerusalem, Jeroboam put up false worshipful places, Golden Calf, in the North at Dan and in the South at Bethel. Hence the expression: The ideas of the temple worship was forgotten and the labor leader put up false gods.

This story of capital and labor 980 B. C. reads rather modern in many of its phases. If someone is inclined to say that there are no similarities, it is still a good story to read now and then, when instinctive righteousness crowds one into a corner.

This is not an essay of condemnation—far from it. It is a warning signal that other great civilizations have traveled this way before. While the cycle of civilization moves up it moves spirally also and repeats many of its errors as it looks down from above.

Dorothy Thompson says that the three main props of civilization are "Christianity, Rationality and Organized Law." This is a very high sounding statement and wonderful if true.

T. S. Eliot, in a series of lectures, "The Ideal of a Christian Society," delivered in 1939 at Corpus Christi College, Cambridge, on the Boutwood Foundation, says that regardless of political practice and philosophy there are only three types of societies by religious standards—the Christian, the Pagan and the Neutral. Without going into too much detail, Mr. Eliot's analysis is that in America it is certain, in England it is fairly certain, that things have gone too far along a path of secularization for a Christian social solution to be possible in anything like the near future; but while proximately pessimistic remains ultimately an optimist. Do scheme for resettling of society upon a Christian basis will seem desirable, he thinks, until society has become desperate.

The rationality of our society can be questioned, except in times of war or stress. The rationality of groups now as they affect the general welfare or the common weal can be questioned often and severely today.

Along with organized law, about which Miss Thompson talks, there is evidence of organized lawlessness among too many groups of our society. If this statement were true as Miss Thompson outlines Western strength, there would be nothing to fear.

Every nation or civilization has had some problem that it could not solve, some evil of which it could not rid itself. The tottering civilizations of today give evidence of destructive qualities. Our technicians, sociologists and some honest economists have arrived at the definite conclusion that often an excellent and constructive compound or discovery or plan

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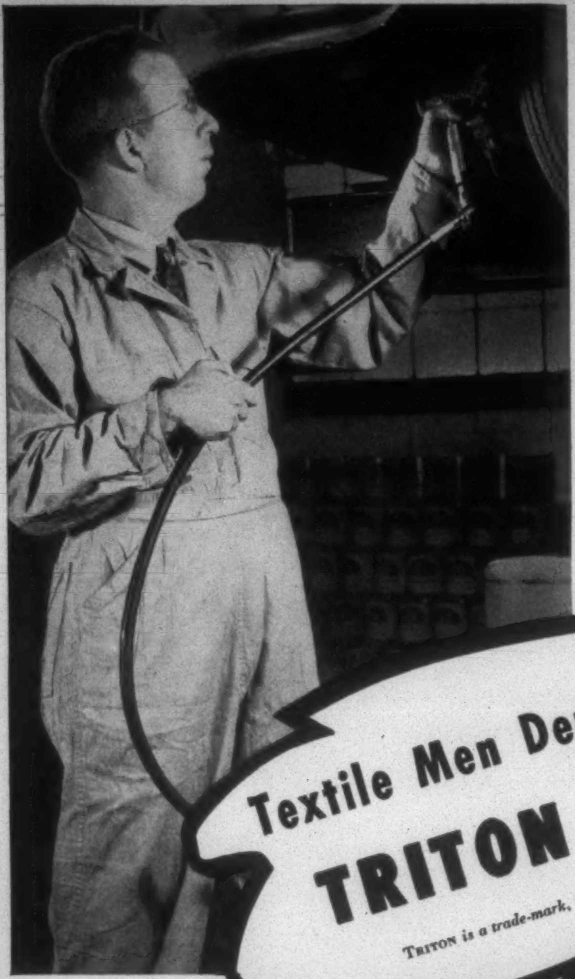

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of life often can and does give off a by-product of destructive qualities, which if not properly handled, will ultimately destroy the usefulness of the product.

The waste coming from the laboratories of the manufacture of the atomic bomb is a problem. The after effects of its explosion are another problem.

Religions with their hates and wars and intolerances furnish another example of dangerous by-product of a supposedly constructive value.

In a previous article, this writer stated that this nation is one of the greatest nations in the world—the richest, the most progressive, the most industrialized, the beacon light among the nations. The reason, aside from the natural physical advantages, is because of its initial basic philosophy of government. Life, liberty and the pursuit of happiness, human personality, freedom, individual initiative were all embodied in the Declaration of Independence, the Constitution and the Bill of Rights. All of these things were possible because this nation in its inception was built upon high ethical Christian principles.

Individual initiative developed science, science developed industry and commercialism, industry and commercialism developed big organizations, big groups of organizations—big steel, the automobile industry, the oil industries, the electrical industries, telephone, commercialized farming, labor groups, consumer groups and hundreds of others.

Here the constructive factors of progress, while still giving constructive products, began giving off destructive by-products which must be given more consideration than they are now receiving.

Life, liberty and the pursuit of happiness, human personality, freedom, individual initiative have changed into group formation. Now it is no longer the individual against the individual, it is the group against the group.

Groups are impersonal, amoral, selfish and once aroused demonstrate the baser instincts of mankind. They are the mob in dress suits. They are the mob, nevertheless—power, prejudice, intolerant, vindictive, selfish, pugnacious are some of the strong words that indicate characteristics observed as groups operate.

This by-product is that which poisons society. This by-product must be neutralized into a harmless excrescence, or it must be remotivated, or best of all, made unnecessary.

The question then naturally arises, how? The answer is as simple as the question. The execution of the answer is exceedingly difficult. Dorothy Thompson gave the answer in three words: Christianity, Rationality and Organized Law. These three words must be given honest and dynamic right of way in the society of this nation.

Science must be directed by men of vision who can sense what the ills and obliquities of social life are and must meet the challenge with the proper response.

The isms and schisms of our society are made possible because of a lack of the evident and dynamic application of Christianity, Rationality and the observance of Organized Law.

These are alarming statements to the weak and timorous. It is pleasant to recount the virtues of society. It is not pleasant to look at society's weaknesses. It is necessary. Many apparently strong and robust men have heart trouble or some insidious disease. Some want to know about their dangers so that they can obviate or cure them; others prefer not to know and prefer to die in ignorance.

All people are only transients on this earth. Their inheritance has been great. It should be their ambition to enjoy this social inheritance and then to transfer it to our successors better than we found it.

This means that we all must realize (1) that civilizations are not things-in-themselves, but simply the *relations that exist* between men living in a given society at a given time; (2) that the goal of history, however dimly sensed in human terms, is the Kingdom of God.

If these facts can be digested and assimilated, there will be no deleterious by-products given off from the synthetics of society as it arranges its jigsaw pieces into the beautiful pattern of social peace.

There will be no danger from social atomic disintegration to form an anti-social bomb, the explosion of which will destroy the 26th civilization.

Democracy is predicated upon morals and intelligence. These must operate to save society.

Report On The Indian Textile Industry

By D. A. S. CHARI

THE Indian textile industry is in the midst of a crisis. Total production of cloth in India[*] has decreased by 23 per cent during the last 30 months. With a population which continues to grow at the rate of well over 5,000,000 per year, and with a huge pent-up demand created by wartime shortages, India needs a greatly expanded production of cloth. Instead, the Government of India is finding it a mighty difficult thing even to distribute a ration of 12 yards of cloth per head. Only in the field of rayon production are prospects very bright in India.

Cloth is produced in India mainly in two ways. The overwhelming proportion of total production of cloth is produced by modern spinning and weaving mills. Last year the production of cloth by the power textile industry amounted to 3,863 million yards compared with 4,870 million yards in 1944. A small proportion of cloth is produced by the hand loom industry, the workers of which purchase machine-spun yarn from spinning mills and weave it in their homes on hand looms. The hand loom industry, which is one of India's most ancient handicrafts, was responsible last year for the production of 1,000 million yards of cloth, as against 1,500 million yards in 1944.

Khadi cloth to the tune of 150 million yards per year is produced by the followers of the late Gandhi, scattered throughout India's 700,000 villages. *Khadi* is cloth woven on hand looms out of hand-spun yarn produced by the *charkha* or the spinning wheel. Mohandas Gandhi, whose opposition to industrialization was well known, held the belief that India's and the world's salvation lies in spurning the machine, and in producing one's needs of cloth and other necessities by hand. Although the Mahatma's faith in this "return to nature" philosophy was not shared by most Indians, a considerable number of Indians agreed with Gandhi that in the present state of lack of industrialization in India and of the existence of tens of millions of underemployed and unemployed agricultural workers, there is a place for *khadi* in the Indian economy.

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[*] In this article the word "India" is used to refer to the Dominion of India which emerged on Aug. 15, 1947, after the separation of the Dominion of Pakistan from the sub-continent. Pakistan is mainly an agricultural state which possesses practically no industry worth the name. There were only eight textile mills situated in Pakistan on Aug. 15, 1947, almost all of which are reported to have been burnt down and destroyed during the fierce communal riots which engulfed Pakistan and a portion of Northwestern India in August and September, 1947.

But the problem of cloth production in India is mainly that of maintaining and increasing the present output of the power textile industry. The textile industry is one of India's largest and employs 500,000 workers, including 150,000 women. There are 389 textile mills in India. Nearly two-thirds of them are concentrated in the great cities of Bombay and Ahmedabad. The total number of spindles existing in the textile mills of India is 10,295,445, and that of looms is 202,000. The mills alone of the cotton textile industry represent a capital investment of over $300,000,000. The industry consumes about 80 per cent of the total Indian raw cotton production of over 5,000,000 bales. In relation to the world textile industry, the Indian industry ranks second in the volume of cotton consumed, and fifth in the number of spindles and looms installed. In 1944, the peak year of production, Indian spinning mills produced 1,680 million pounds of yarn. Since then there has been a steady drop in production both of yarn and of cloth mainly caused by worn-out machinery and the more or less complete absence of replacements.

During the war the Indian textile industry supplied cloth at the rate of 750,000,000 yards per year to the armed forces. The war period also witnessed an enormous expansion of the industry. More than a dozen new mills and a hundred hand loom factories were established. Between 1938 and 1944 the quantity of cotton consumed and the number of persons employed rose by 33.5 per cent and 15.5 per cent, respectively. Labor-saving devices were installed and a new spinning technique was developed.

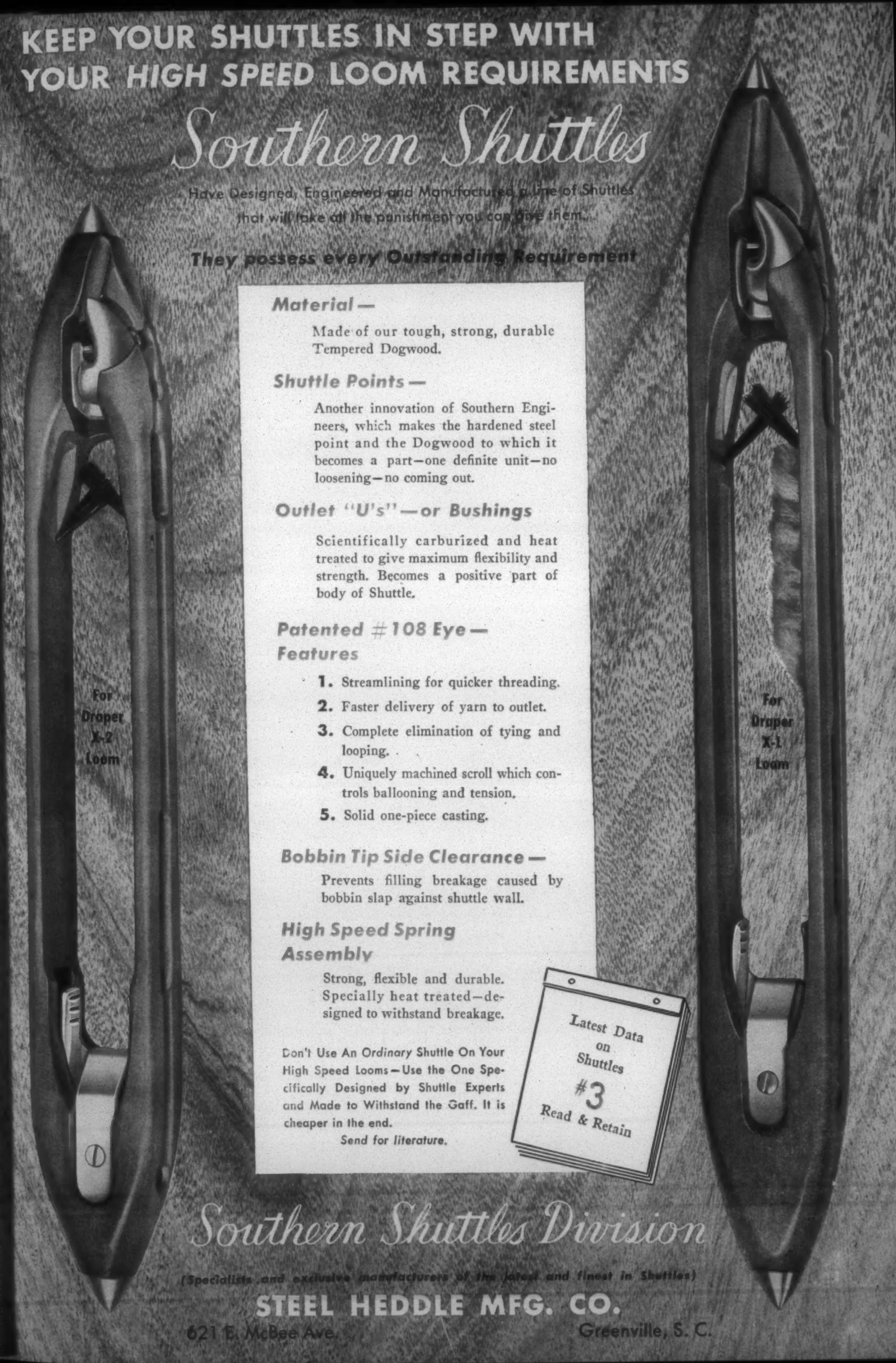
Spinning of cotton yarn in a Madras textile plant. Yarn in this particular case will be used for making Khadi cloth, which goes into uniforms for the Indian Army. Madras is the third largest textile center in India. Bombay and Ahmedabad are first and second, respectively.

The textile industry experienced a period of great prosperity. Its chain index of profits rose from 100 in 1928 to 760.7 in 1942. In 1944 the industry netted a profit of $38,000,000. The price of cloth in March, 1943, stood at nearly five times its pre-war level. Due to control measures adopted by the Government of India, however, there has been a steady recession in price, and today the wholesale price of cloth stands at about 2½ times the pre-war level.

It was in the field of imports of cloth that a very revolutionary change occurred during the war period. In 1928 India imported 1,937 million yards of cotton piece goods, almost exclusively from Lancashire and Japan. This represented 36 per cent of India's total consumption of cloth. Since then there has been a steady fall in the imports of cloth into India. In the inter-war period the Indian textile industry underwent considerable expansion. The number of mills increased from 258 to 377; of spindles from 6,700,000 to 10,000,000; and of looms from 118,000 to about 200,000. The output of yarn more than doubled in weight and of piece goods nearly trebled in yardage. Many technical improvements were effected by the industry during that period, chief among them being the installation of modern machinery for spinning and weaving, and the development of new bleaching, dyeing and finishing processes.

Imports of cotton textiles, mostly of fine counts, fell in 1938 to 600,000,000 yards. This tendency was inevitably accelerated by the war. In 1945 only 4,500,000 yards of cloth were imported. The value of textile imports from the United States in that year amounted to $4,002,000. Even in the post-war period imports account for a negligible proportion of the consumption of cloth in India. This is not to say that there is not a demand in India for cotton textiles of very superior finish. But shortage of foreign exchange precludes large-scale imports of cloth into the country. Instead of importing vast quantities of cloth as it used to do only two decades ago, India at present exports 300,000,000 yards of cloth, mostly to the Middle East, East Africa, Burma, Australia and New Zealand. In spite of the acute shortage of cloth in the country, the Government of India has insisted on exporting this amount of cloth as a measure of obtaining foreign exchange, and in view of the critical shortage of cloth in Southeast Asia.

It has been officially estimated that over 80 per cent of the textile industry's 10,000,000 spindles and 202,000 looms would need replacement during the next few years. The Indian textile industry plans to spend $300,000,000 for rehabilitation and expansion. Orders for $50,000,000 worth of textile machinery have already been placed with British manufacturers. But the trouble is that British textile machinery manufacturers are proving themselves quite incapable of supplying the needs of India. A prominent Indian industrialist, who visited Great Britain recently, estimated that it would take at least seven years before a single spindle or loom was supplied to India by Great Britain. Britain's own textile industry needs extensive rehabilitation. British manufacturers are extremely anxious to set the British industry on its feet again. The needs of such till-now dependent countries as India figure last in the list of priorities. British textile machinery manufacturers have consistently refused to commit themselves as to prices. Orders are booked only on the understanding that prices which might pre-



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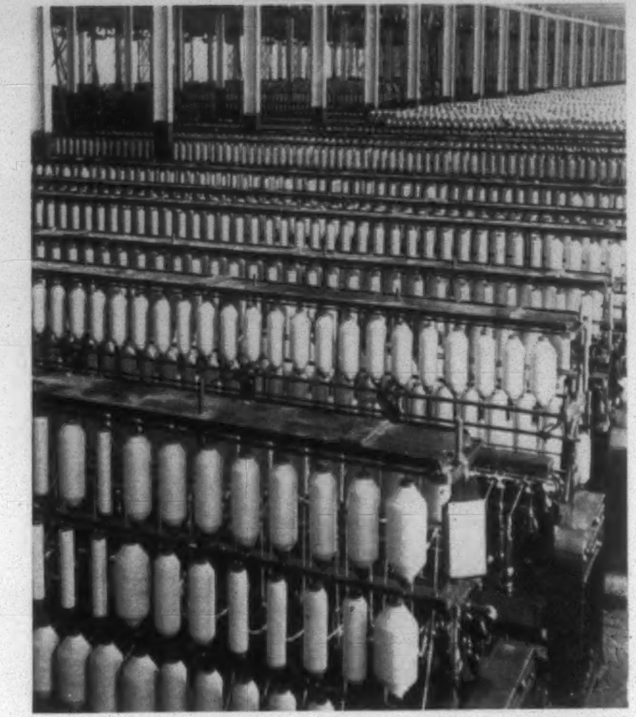

Roving frames in a big Bombay spinning mill. This is one of the more modern plants, equipped with the latest type of processing machinery. It employs 12,000 workers.

vail at the time of delivery would be paid. Prices of British textile machinery rose by 50 per cent in 1946 alone over those of 1945. Compared with pre-war prices the rates prevailing today range from four to five times.

India is prevented by her adherence to the sterling bloc and the dollar pool from purchasing extensive equipment from the United States and other hard currency areas. India has always had a favorable balance of trade with the United States. During the war period she contributed several hundred million dollars to the dollar pool. But she was allotted only $20,000,000 per year out of the dollar pool for the import of all kinds of capital goods from the Western Hemisphere. This figure is ridiculously low when compared with the estimate made by the Government of India of the total requirements of capital goods of the country. This comes to $1,700,000,000 for the next five years.

The recent crisis in British industry has, of course, resulted in the prospects of delivery of textile machinery from Britain being made more remote. All this has resulted in increasing demands from Indian industrialists and economists for the dissolution of the dollar pool and for India leaving the sterling bloc. There is, however, one bright spot in this otherwise gloomy picture regarding the availability of textile machinery. An agreement to manufacture textile machinery in India has been reached between a combine of Indian textile industrialists and the well-known British firm, Textile Machinery Makers, Ltd. A huge textile machinery manufacturing plant, ultimately capable of turning out half a million spindles per year, is being erected in Bombay. The Indian company has been formed with a capital of $4,500,000. Of this, the British firm, Textile Machinery Makers, Ltd., has been allotted shares worth $1,200,000, two-thirds of which is free of payment in return for good will, patent rights, technical assistance and benefit of all past and future research. Textile Machinery Makers, Ltd., will be represented on the board of directors up to a fourth of the total strength. The financial control and management of the firm will be in Indian hands. Full production is expected to be achieved in five year's time. British technicians will be employed in large numbers, although it is expected that most of them would be replaced once a sufficient number of Indians have received training. Many Indian industrialists are anxious to conclude similar agreements with U. S. textile machinery mnaufacturers for production of textile machinery in India.

The Government of India in association with the Indian textile industry has prepared an ambitious plan for the expansion of India's cloth output. The Post-War Planning Committee has recommended that 2,750,000 additional spindles be installed in India. One million two hundred fifty thousand of these spindles would be capable of spinning counts 40s or finer; the balance would spin coarser varieties. This expansion is expected to add 1,700,000,000 yards to the annual production of cloth. A noteworthy feature of this plan is the fact that a check would be placed on the unhealthy concentration of the textile industry around the great industrial metropolis of Bombay. Only 152,000 additional fine spindles would be installed in Bombay mills. The balance of the contemplated additional spindles would be allotted to mills dispersed throughout India The idea is to make each of the regions of India self-sufficient in the production of cloth. But all these schemes for expansion depend entirely on the availability of capital goods.

In contrast to the gloomy position (described above) of the Indian textile industry, the infant rayon industry presents a vey bright picture. Before the war India imported all her needs of rayon. Pre-war imports, mostly from Japan, averaged 31,600,000 pounds of rayon yarn and 88,000,000 yards of rayon piece goods. In the pre-war period there was no indigenous industry in India for the manufacture of rayon. The imported rayon yarn was woven in small weave mills in South India and Bombay.

Today four ventures for the manufacture of rayon yarn in India have been taken on hand. The biggest of these enterprises is the National Rayon Corp., which is erecting a $10,000,000 plant at Kalyan, a city 50 miles from Bombay, for the production of viscose rayon, with a daily output of ten tons of 120 and 150 deniers. This enterprise has been undertaken in co-operation with the Skenandoa Rayon Corp. of New York. The U. S. firm will supply technical assistance, patents, research facilities, etc. The National Rayon Corp. is expected to commence production in 1949.

Another huge rayon factory is being erected in Hyderabad State, with the co-operation of Messrs. Lansil, Ltd., a British firm. Machinery worth $6,000,000 for this factory will be purchased mainly in Great Britain. Two smaller rayon factories are being erected in Mysore and Travancore. The erection of three other factories elsewhere in India is being contemplated.

India is rich in cellulose bearing materials—cotton, bamboo, wood, bagasse, hemp, reeds, etc. Two research institutes are being erected in India by the government to conduct research in all aspects of rayon manufacture. However, it will be necessary for Indian rayon factories to import pulp wood and chemicals from abroad for some time to come. The Government of India's plan for industrial expansion calls for the erection of seven rayon factories, in all, in the country. It is estimated that capital goods worth $30,000,000 will be required for establishing these seven factories.

Indian industrialists are very anxious to obtain the co-operation of U. S. rayon manufacturers. There is a feeling in second-rate. The premier Indian journal, the *Eastern Economist* of New Delhi, recently said: "It must not be overlooked that in respect of efficiency and improved manufacture of rayon, Britain takes the fifth place in the world. It is necessary that restrictions on dollar exchange should be relaxed in cases where suitable machinery can be purchased in U. S. A."

The Indian rayon industry offers perhaps the best possibilities of Indo-U.S. co-operation. All trends in India point to growing association with U. S. manufacturers. While Indians are very keen upon retaining financial control of factories erected in the country, they are anxious to obtain "know-how" from the U. S. industry. Since the rayon industry will rank as one of the bigger industries of India, it is probable that the various provincial and state governments would like to subscribe a portion of the capital and have some voice in the management. An arrangement along the lines of the provincial or state governments contributing about 25 per cent of the capital, the Indian public purchasing about 51 per cent of the total issue of shares and the U. S. firm being offered the balance of shares, partly without payment in return for technical advice and patents, is indicated.

India has on hand vast schemes of industrialization. Today only about one per cent of the total population is employed in industry. If this small percentage is increased even slightly, the country's demands for rayon would be multiplied by many times. It is, therefore, not expected that India will be closed completely to rayon imports even after the factories at present under erection commence production.

Study Predicts Continued Rayon Shortage

The Outlook for Rayon, a report prepared by the statistical department of Oscar Kohorn & Co., Ltd., 501 Fifth Avenue, New York City, under the direction of Joseph Wirth, comptroller of the company, predicts that unless domestic rayon producers greatly increase their efforts to expand facilities, the "actual and potential demand for rayon and staple fiber in the United States will continue to outstrip available supply sources by a substantial margin for a minimum of four to five years." An increase in output of viscose filament textile yarn in 1948 of less than two per cent and in 1949 of another three per cent, with 1950 practically unchanged, is forecast in this study, and contrasted with the prediction of some observers that there will be an annual consumption of two billion pounds by 1960. This is more than twice the present production of both acetate and viscose process yarn.

Commenting on the prospect of continued gains in the demand for rayon yarn the study states it is significant that "one large manufacturer of textile machinery estimates its domestic shipments of looms during the next two years for filament and staple, as between 12,000 and 16,000 looms." The statistical study contains compilations on production and consumption of rayon in the United States and the world gathered from authoritative sources and a survey of current construction and expansion by U. S. producers.

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Cotton Council Plans Vigorous Program

THE American cotton industry was assured of the most vigorous and intensive program of activities in behalf of increased lint and seed consumption in all history at the tenth annual meeting of the National Cotton Council Jan. 21-23, in Atlanta, Ga. During a three-day program featuring addresses by Oscar Johnston, Secretary of State George C. Marshall, Secretary of Agriculture Clinton P. Anderson and Wheeler McMillen, the 250 official council delegates representing the six branches of the industry adopted a strong program of research and promotion.

Keynoting the conference, Council President Johnston told an audience of more than 800 that the "American cotton industry is setting an example, which, if followed by the nations of the world would replace world uncertainty with progress and plenty. A decade ago, cotton's position was one of uncertainty," the council leader asserted. "Like the nations of the world, each branch of the cotton industry sought its own security, utilizing only a fraction of the industry's total power and attacking only those problems which circumstances presented. In the future of consumption programs already initiated lies the future of cotton," Mr. Johnston declared. "Their future, in turn, lies with us who have been selected by the industry to lead the way. It lies in the degree of aggressiveness we maintain, the extent of support we give, the volume of manpower and money we generate, the tolerance we practice in handling internal differences of opinion, the loyalty and leadership we exercise in fulfillment of the trust we have accepted."

Cotton and E. R. P.

Secretary of State George C. Marshall emphasized the importance of cotton's part in the European Recovery Program in his address on the second day of the meeting. "One of the materials most needed is cotton," he told the delegates. "The South has made progress in recent years, through diversification and industrialization, toward eliminating the adverse effects of a one-crop economy. But cotton remains the principal cash crop of the South and will continue to be an important product of this section. Therefore the South is directly interested in the volume of cotton exports to Europe during the proposed recovery program. Such shipments are estimated to total more than ten million bales during the 4¼-year period. During the first 15 months, April 1, 1948, to July 1, 1949, shipments are planned to total three million bales. The volume of cotton to be supplied by other Western Hemisphere countries will be approximately half as much as the United States is to supply. In estimating the prospective allocations of cotton to Europe from this country, careful consideration had to be given to the question of assuring an adequate supply for domestic consumers. Domestic demands, coupled with last year's short crop, have reduced our cotton stocks to a minimum level of safety. Allocations of United States cotton to be provided under the recovery program must be limited accordingly."

Production and Marketing

A 17-point program in cotton production and marketing was adopted by the council on recommendation by Committee Chairman Ransom E. Aldrich, Michigan City, Miss. The 1948 program stresses the need for additional appropriations to continue and expand the work begun under the Research and Marketing Act of 1946. It also promises increased support of mechanization research programs and the continuation of the annual Beltwide mechanization conference. Programs will be supported to stimulate development and expanded use of cottons of superior qualities, higher yielding strains, varieties best suited to mechanized production, one-variety communities, and improved soil management and fertilization.

Utilization Research

The council during 1948 will support a drive for full appropriations authorized for the fiscal year under the Research and Marketing Act of 1946. It will appeal to the Secretary of Agriculture for allotments of research funds to cotton and cottonseed on the basis of urgency of the need, and will endeavor to have every dollar of funds provided placed in projects promising to be of greatest practical value in strengthening cotton's competitive position. Full support will be given the cotton advisory committee and the cottonseed sub-committee appointed under the Research and Marketing Act. The council praised the Bureau of Agricultural Economics for its 1947 consumer survey and urged broadening of this type of activity in 1948. It also pledged full support to the Bureau of Census in the campaign for an adequate cotton statistical service. Again in 1948, the council will resist any efforts to impose governmental standards of flammability, and will urge that voluntary standards be established only on the basis of a realistic appraisal of the problem and the practical effects of such standards.

Foreign Trade

The Secretary of State's European Recovery Program was endorsed by the council on recommendation of S. Y. West, Memphis, Tenn., chairman of the foreign trade committee. Industry leaders also voted to urge Army and occupation authorities to seek to direct textiles to the textile-deficit areas of the world, pending "the earliest possible return to private, competitive enterprise." Appointment of a committee by proper government agencies to work out plans for procurement of necessary supplies of cottons 1⅜ inches and longer to meet domestic demands also was recommended. Liberalization of licensing of raw cotton, textiles, and cottonseed products was asked to prevent unnecessary delays in exports and needless losses to buyers and sellers through market changes between the time sales are made and licenses are issued.

Sales Promotion

All council promotion campaigns in the apparel and household fields will be continued in 1948 with intensification in the current major market campaign among sales personnel. Co-operative campaigns with bag and insulation manufacturer groups will be continued and campaigns now being launched by the canvas goods and linen supply industries will be supported by supplementary council advertising. The cotton identification campaign initiated at the

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Specially designed for running synthetic and natural fibers, the new red Dayco Type "SE" Roll Covering processes synthetics with greater uniformity, with less lapping up and practically no ends down. Not affected by heat or humidity, The Dayco Type "SE" Roll Covering will give the same uniform service throughout its extremely long life. Remember, whether you're running cotton, wool or synthetics there's a mill-proved Dayco especially engineered for your frames. For complete information write Dayton Rubber, Dayton, Ohio, or *Textile Division—Main Sales Office, Woodside Bldg., Greenville, South Carolina.*

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Whether your frames are equipped with flat or revolving clearers, there is a specially engineered Dayco for maximum results.

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Dayton Rubber

1946 annual meeting will be continued in 1948, it was voted.

By unanimous vote, the council delegates declared that proposals currently being made to meet the threat of inflation "through the re-imposition of domestic price control, allocations, rationing, or other similar restrictions are utterly fallacious. . . . . Therefore, the re-imposition of such controls in peacetime should be opposed unconditionally. The only really effective way to control inflation is to produce and maintain adequate supplies of the products that are causing inflation," the resolution stated. "Therefore, every effort of the government, agriculture, industry and labor should be concentrated on stimulating maximum production of all products that are in short supply and on preventing supplies of such products from being drained to a dangerously low level through exports from this country."

Johnston Retires From Presidency

Harold A. Young, North Little Rock, Ark., cotton planter, will serve as president of the council during 1948. Mr. Young was elected to succeed Oscar Johnston, Scott, Miss., "father of the council," when Mr. Johnston requested that he be allowed to retire from the presidency. The board of directors of the council elected Mr. Johnston to serve as chairman of the board. In tribute for his long services as head of the industry-wide organization, the board voted to create an Oscar Johnston Cotton Foundation and appropriated the initial $50,000 to set the foundation in motion. Other officers named by the board include H. L. Wingate, Macon, Ga.; L. T. Barringer, Memphis, Tenn.; and A. L. Durand, Hobart, Okla., all vice-presidents; Wm. T. Wynn, Greenville, Miss., treasurer; and Wm. Rhea Blake, Memphis, Tenn., executive vice-president and secretary.

Representatives of the cotton spinning division of the industry on the new board of directors include: Hugh M. Comer, president and treasurer of Avondale Mills, Sylacauga, Ala.; Charles C. Hertwig, president and treasurer of Bibb Mfg. Co., Macon, Ga.; Ernest Rees, president and manager of Elk Cotton Mills, Fayetteville, Tenn.; Fred W. Symmes, vice-president of F. W. Poe Mfg. Co., Greenville, S. C.; and A. K. Wingate, president and treasurer of Efird Mfg. Co., Albemarle, N. C. Robert R. Coker of Hartsville, S. C., and Lamar Fleming, Jr., of Houston, Tex., were renamed as advisors to the board of directors. The board voted unanimously to hold the 1949 annual meeting of the council in California, the convention city to be named at a later date.

FABRICS WOVEN BY REEVES BROS., INC., went into these industrial garments designed by Helen Cookman, one of the country's top fashion experts. The garments were exhibited during a Reeves fashion show last month in New York City. Shown left to right are uniforms for various vocations: textile worker; mechanic; apron and dress ensemble which can be worn to and from work; shirt and trousers combination offered as alternate to overalls; all-purpose, coat-dress smock; airlines personnel uniform; milk man or beverage man; gas station attendant; bus driver; waitress; open-throat, collarless coverall; surgeon's gown.

Higher Textile Prices Seen In 1948

The textile industry has entered 1948 with prices creeping upward, production remaining at a high level, and improving supplies of most types of essential goods in the offing. In cotton goods, increasing quantities of wanted fabrics are said to be on the way and continued high production points to more liberal supplies of finished products. Dr. Claudius T. Murchison, president of the Cotton-Textile Institute, said mills have been shifting constantly in recent months to production of such items as print cloths, sheetings, combed lawns, broadcolths and similar goods. John M. Reeves, president of Reeves Bros., Inc., reports that an increase in production during the first half of 1947 in the face of a decline of actual cotton consumption indicated a decided shift to lighter weight fabrics.

The National Federation of Textiles summed up the synthetic fabric situation during the past year by reporting: "The supply and demand continued to present a picture of reported shortages contradicting all-time high production records." Synthetic yarn fabric production broke all records during the past year, the federation revealed, with quarterly average production (based on three quarters) of about 458,000,000 yards of rayon, nylon silk and similar fabrics. This compared with 453,400,000 quarterly in 1946 and 352,500,000 before the war. The American Wool Council predicted that fine woolen goods would be short during 1948 and that prices on all types of woolens would increase.

Dr. William P. Jacobs, president of the American Cotton Manufacturers Association, states that while to all appearances the textile industry should have a good year in 1948, with many manufacturers sold well up into the second or third quarter, the question of costs and other problems will have much to do with the industry's condition in 1948. He explained that costs have been increasing at an alarming rate for many months. Dr. Jacobs declared that the industry enters the new year with mills operating at close to peak levels and with backlogs of orders sufficient to support the current rate of operation at least for the first half of 1948.

The hotel industry represents a waiting market for close to $50,000,000 worth of cotton goods with sheets, pillowcases and table linens leading the demand, according to Charles A. Horrworth, executive vice-president of the American Hotel Association. Basing the estimate on a closely tabulated survey taken of the 5,700 leading hotels comprising the association's membership, Mr. Horrworth said that most hotels were just now emerging from the hectic six-year period of overcrowding which had been aggravated by serious shortages of materials and supplies, plus a critical lack of well-trained employees. As soon as the output of cotton goods meets the demands by hotels, over $15,000,000 will be allocated for sheets; some $4,000,000 for pillowcases; and $10,000,000 for table linens. Bed spreads, bath mats, towels, and other cotton products constitute the remainder of the standing order, Mr. Horrworth stated.

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3 . . . by making use of the centrifugal force and impacts generated by the beater in the Vertical Opener to carry the heavy impurities through the grid bars.

4 . . . with the Lattice Opener and Cleaner, preferably in tandem, to complete the reduction and opening of the stock.

. . . and with the recirculating Air Filter used in conjunction with this equipment it is possible to maintain a stabilized and conditioned atmosphere in the opening room so that full regain is possible.

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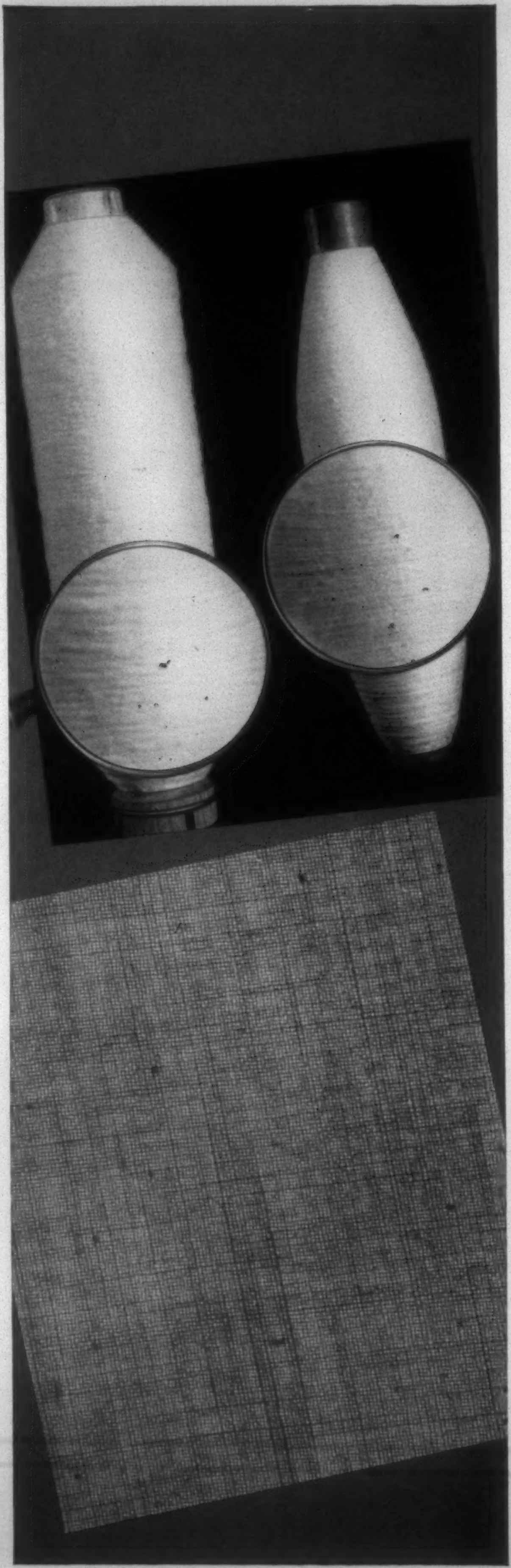

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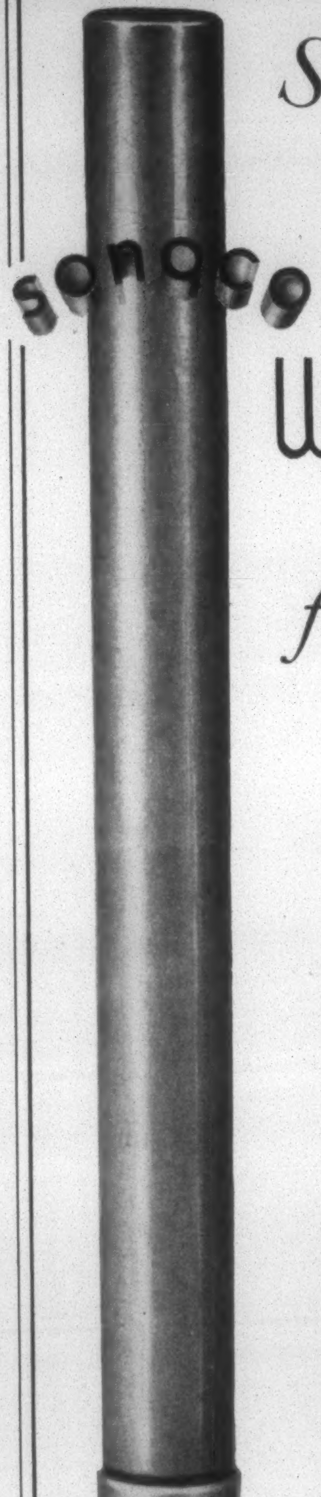

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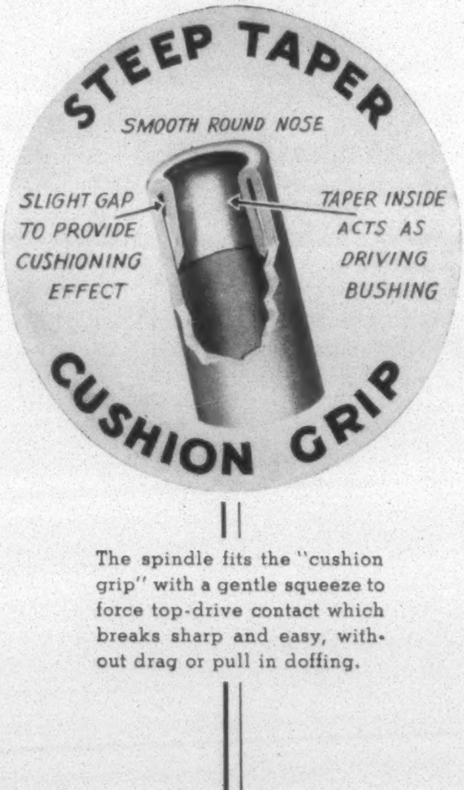
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DEPENDABLE SOURCE OF SUPPLY

THE MILL OF TODAY

By ROBERT Z. WALKER

Part One: Mixing and Blending

IN beginning a discussion of the methods and practices followed in processing fiber in the modern textile mill the most logical place to begin is in the opening room. This is particularly true due to the fact that while a great deal is written about the technical aspects of later stages in the conversion of raw fiber to cloth, the subject of opening has been rather neglected. There are several reasons for the scarcity of material pertaining to this primary stage.

It was not so long ago that the opening equipment found in the average cotton mill consisted of several balebreakers. The only opening which was accomplished was to separate the large clumps of cotton taken from the bale into smaller bunches. The picker was called upon to do the major part of removing the dirt, dust, waste, and other impurities from the good stock. Any old mill man will testify that the opening room and the picker room were the places in the mill in which not to work, for they were dusty at all times and were cold in the winter and hot in the summer.

This is in contrast with the mill of today with controlled temperature and humidification which always maintain constant room conditions. The lint and dust that once contaminated the air and caused such discomfort to the operators is noticeably absent, due to the installation of air filters wherever needed. The balebreaker has been replaced with efficient cleaning machinery which cleans the fibers without subjecting the stock to harsh, damaging action. The evenness of the picker lap has been improved immensely by the installation of controlled feeding systems, operating both mechanically and electronically, which links every opening machine to each other and to the picker.

This is, in brief, an over-all picture of the changes which have been made within recent years. The reason for making each of these changes has been to achieve one or more of the following objectives: (1) to accomplish more complete opening; (2) to open the stock with a minimum of harsh handling; (3) to reduce the amount of unevenness of the final lap; (4) to obtain a higher degree of uniformity of fiber characteristics; (5) to reduce the amount of manual labor necessary; and (6) to make the operating conditions more healthful and pleasant under which to work. The mill which followed the old methods of preparing the stock for the picker did not place a great deal of importance on the balebreaker which constituted the opening line. Usually a small space in the warehouse was cleared off and the balebreaker installed there. The cotton was taken from a few bales, or in many cases from one bale, and was fed to the breaker. Neither pre-conditioning of the stock nor blending large mixes from many different bales was resorted to. Balebreakers were fed either by loading the stock into a large hopper in the back of the balebreaker or by placing the stock onto an extended feed apron. The extended feed apron was an improvement over the hopper feed as it was equipped with a rake feed regulator which helped maintain a constant supply of stock to the lifting apron of the machine. The performance of the opening line was largely dependent upon the conscientiousness of the operator, and generally the supervision of the opening room was very lax. The usual practice of the operator was to fill the hopper of the balebreaker full, or to load the extended apron heavily, and then rest until practically the entire supply of stock was exhausted. As a result of this haphazard feeding the machine would be over-loaded for a while and then would run for a period in which it did not have an ample supply of stock to maintain any semblance of evenness.

The well-run mill of today realizes the importance of pre-conditioning the stock and of obtaining a well blended mixture of fibers from a large number of bales. The opening room is a room by itself and is large enough so that there is plenty of space in back of the feeders which receive the stock as it comes from the bale. A humidifying system and a heating system maintain a constant atmospheric condition; for atmospheric control is necessary if the full advantage of pre-conditioning the stock is to be realized.

Cotton is kept in the warehouse and during this time is subject to changes in temperature and moisture content, for it is neither practical nor necessary to attempt to control the atmospheric conditions existing within such a large building. This means that in the summer the cotton in the warehouse will probably be hot and humid and in the winter will be cold and dry. Dry, cold fiber is difficult to process as it is harsh and brittle, and because it is very conducive to the generation of static electricity. On the other hand, fibers which are too heavily saturated with moisture will not be opened and cleaned completely as there is a tendency for the

The proper method of supplying stock to feeders.

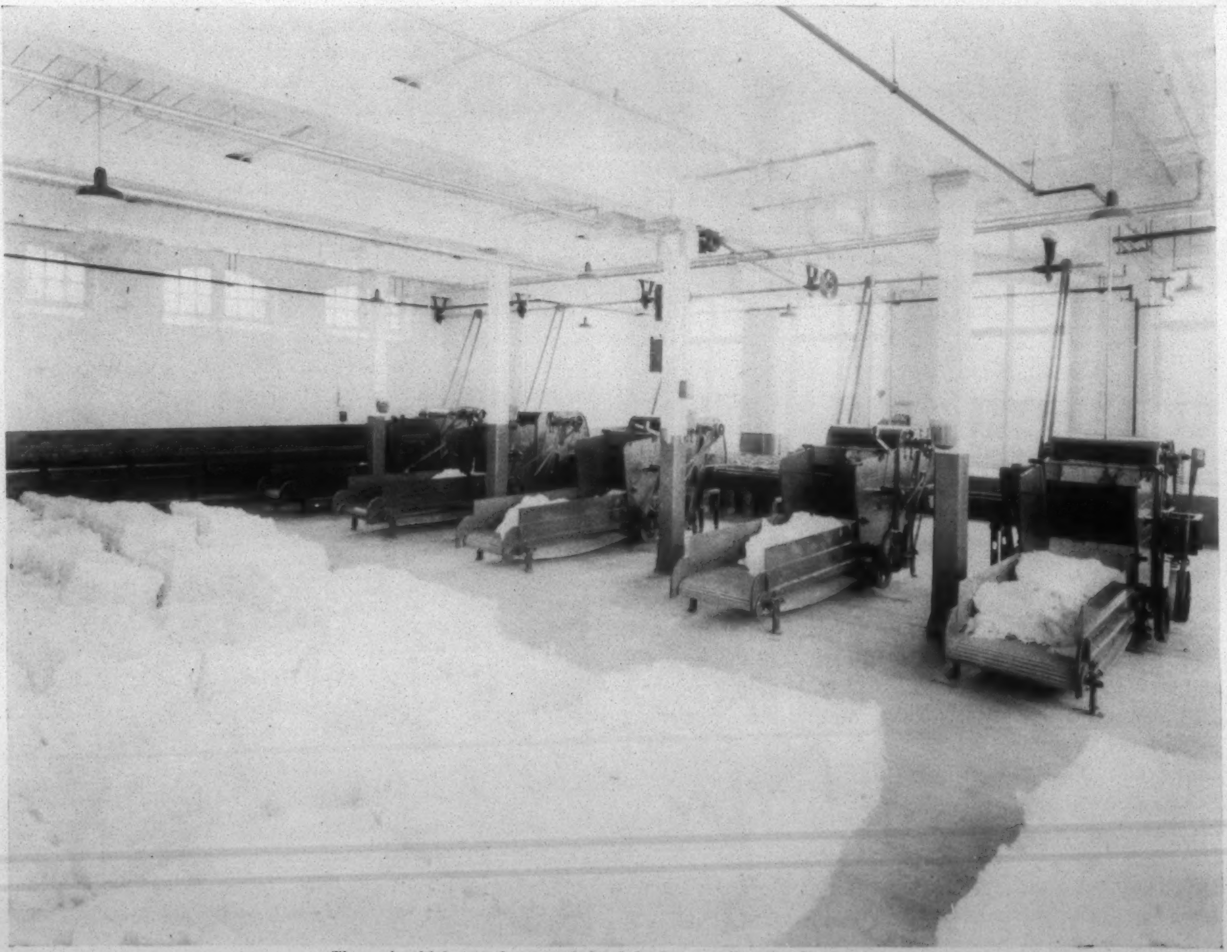
clumps of fibers to adhere together and to hold the waste and foreign matter more tightly. Blooming, or the removal of dust, is not carried out as much as is possible as the moisture causes this light matter to cling more tightly to the good fiber.

Full conditioning of the stock can be accomplished very easily and at small expense as long as the opening room is large enough in size. Twenty-four hours before the bales are to be used they are trucked into the opening room. Once within the opening room, which is maintained at the proper operating atmospheric conditions, the bale ties are cut and the bagging loosened. As soon as the restricting bands are loosened the natural characteristics of the stock cause the fibers to loosen and pull away from each other. The masses of fibers become more loosely packed and will be easier to open mechanically and as the bunches of fibers become loosened small air channels are formed. The conditioned air passes through the channels and will, in a period of 24 hours, bring the stock to the correct standards of humidity and temperature.

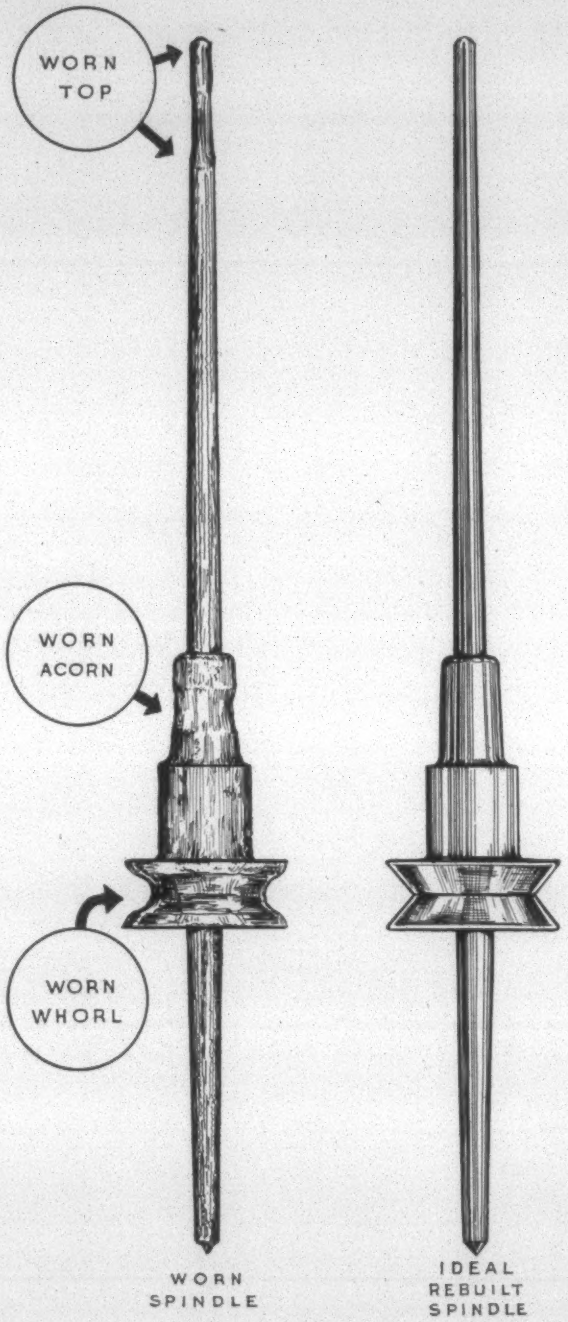
It is a generally accepted fact that two bales of cotton, each with the same grading, will vary considerably. These variables which affect the performance of the machinery in the mill, and the uniformity of the finished yarn, are the amount and type of impurities and waste which is present, the color of the fibers, the mean staple length, and the other individual fiber characteristics such as strength, age, and the degree of brittleness. By taking a large number of bales of cotton and mixing them together thoroughly a certain uniformity of fiber characteristics and fiber length will be produced, and this uniformity can be maintained over an extended length of time with a considerable degree of success. In starting out with a uniform mixture of stock in the opening room it is possible to produce a yarn which is also uniform in color, count, and appearance without the necessity of making continuous gear changes and other adjustments on the machinery throughout the mill. The freedom from the need of constant machine adjustments is an important factor in maintaining the high standard of machine efficiency which helps to make the operation of the mill successful and free from production problems.

At the end of 24 hours the stock is conditioned and is ready for processing. The next problem is to prepare a mix so that the bales will become blended into one homogeneous mass. This blending, or mixing, is begun at the back of the feeders and is carried out throughout the mill, although at latter stages of the manufacture it is called doubling. Each feeder should be spaced at least eight feet apart and should have at least enough space behind it to permit laying out six bales of cotton. If it is possible there should be enough space to lay out eight or six bales of cotton. If it is possible there should be enough space to lay out eight or ten bales, and in many mills the mix is composed of 12 bales behind each feeder.

If cotton is being processed the bales may be brought from the pre-conditioning point and placed directly behind the feeder. The operator then maintains the supply of stock



There should be ample space behind feeders to allow for large mixes.



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24 TH YEAR OF CONTINUOUS SERVICE TO TEXTILE MILLS

in the feeders by taking a layer from each bale in the mix in rotation. If the yarn is to be composed of a blend of different types of fibers, such as cotton and synthetics, or different synthetics, it is advisable to organize a method of mixing which will assure even more complete initial blending. The accepted manner of making up such a mix is to use the so-called "sandwich mix." The sandwich mix is a refinement over the regular mix and takes more time to prepare. After the bales of the different fibers are preconditioned they are brought up near the feeder. The first bale is then split into as many layers as there are bales to be mixed, or piles of stock to be made. These layers from the first bale are placed on the floor at regular close intervals. The next bale is opened and a layer from it is placed on the layer from the initial bale. This procedure is repeated until all of the bales have been split into layers and placed on the piles. The manner of feeding that should be followed with this type of mix differs from that when employing the ordinary method of mixing. With the ordinary mix the operator merely takes a layer from the different piles back of the feeder and places this on the extended apron of the feeder. He takes a layer from each pile in rotation. With the "sandwich mix" it is necessary that the supply of fiber which is fed to the feeder be taken, not from a layer of the pile, but from the cross-section of the pile. As a complete cross section of the pile is fed to the opening machine a part of each layer from each bale in the mix is fed at all times.

The undertaking of blending and choice of blends introduces many problems into the operation of the mill. There is presented to the mill an infinite number of blends which can be used, and each blend will differ in some respect from other blends. While this is extremely advantageous to the fabric designed it makes the efficient operation of the actual processing in the mill much more difficult and complex. For, just as each blend will produce a different effect in the finished fabric, it will also require adjusting the machinery to conform to the operating characteristics of the component fibers. The common knowledge which textile technicians have today in regard to this versatile subject is limited for there are so many factors which influence machine speeds, settings, and other mechanical adjustments. The only way to adjust the mill to a new blend is to first select a blend which seems suitable to the machinery in the mill and then to follow the fiber through the various stages of processing, making all of the necessary changes which are deemed necessary. The success of the operation will depend upon the experience, knowledge, and patience of the engineer in charge for he will have to experiment and test until the best results are obtained.

It should be realized at once that there are limiting factors which will prohibit the use of all types of fibers in a blend. The average cotton mill will not be able to make a blend which has as a component fiber one that is over $1\frac{9}{16}$ inches in length. Fibers which are longer than this are not feasible due to the impractibility of setting the rolls of the different cotton drafting systems far enough apart. If the fibers are too long to be accommodated by the drafting systems then there will be excessive fiber breakage with its resultant large amount of waste and fly, the spinning of uneven cockled yarn, and the possibility of trouble due to long fibers lapping around rolls which are really too small in diameter to handle this type of work. This is particularly true with regard to the blending of wool with either synthetic fibers or cotton.

When using synthetics in a blend the use of coarse denier fibers must be avoided. Coarse deniers should be avoided as the number of individual fibers in the cross-section of even a moderately fine number of yarn will be too low to produce the necessary strength.

In making up any blend the specific gravity of the different fibers must be carefully studied. A blend may be started with the fibers in the mix behind the feeders but experience has shown that as the stock is processed further there will be a gradual separation or unblending of the different components. This will begin in the feeder as the stock is rolled around, and is intensified every time the fibers are carried forward by air. The separation will continue when drafting by rolls in the drawing frame, the roving frame, and the spinning frame. Attempts to blend fibers which have wide variations of specific gravity, or weight, have always caused trouble due to this tendency to separate.

Blends should not only be avoided which have fibers over the maximum staple length of $1\frac{9}{16}$ inches but also which have fibers which are under this length but are not of approximately the same staple length. If the two fibers of the blend are of staple lengths which are quite far apart it will be impossible to set the rolls of the drafting systems satisfactorily. The rolls will either have to be set closely for the shorter fibers or far apart to suit the long fibers. In one case the long fibers will be broken and damaged, causing uneven yarn, or else the short fibers will be drafted out of control, with the same poor results.

The industry as a whole has a great deal to learn about the formation and processing of blends. However, just as the methods of handling raw fibers have improved steadily, experimentation and careful study will make possible the processing of more complex blends.—*To be continued next month.*

Foreign Rayon Received By Mills

The South Carolina State Ports Authority has announced that one million pounds of rayon fiber from Holland and Belgium, consigned to South Carolina textile mills, arrived in the port of Charleston Feb. 9. The South Atlantic Steamship Co. freighter, Southwind, discharged the fiber at the state terminals at North Charleston, from which point it was shipped by rail to the Abney Mills and the Greenwood Mills, both of Greenwood, S. C.

The authority termed the shipment as important "new cargo" for the port, and said that it was the beginning of a regular flow through Charleston of foreign rayon fiber to Southeastern textile mills. The staple, used in the making of rayon cloth, has hitherto been imported largely through North Atlantic ports.

A growing export trade in textiles has been developed through the port over the past year, culminating in the Department of Commerce announcement recently that more than $4,000,000 worth of textiles moved to all parts of the world through Charleston in November, 1947. The importation of foreign rayon fiber rounds out the port's services to the textile industry of the region, the authority said. The Carolina Shipping Co. is Charleston agent for the Southwind, one of the South Atlantic Line vessels which provide

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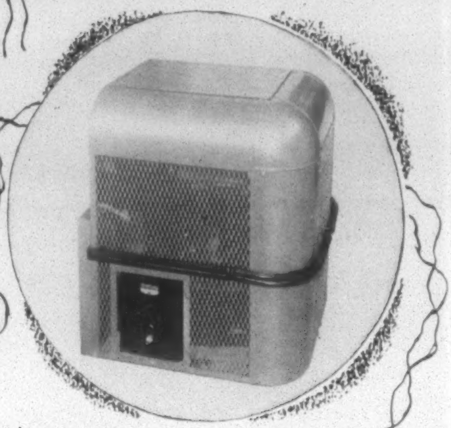
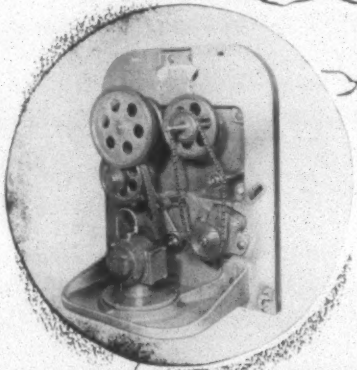
From motor pulley to twister package

HERE'S PERFECT POWERING

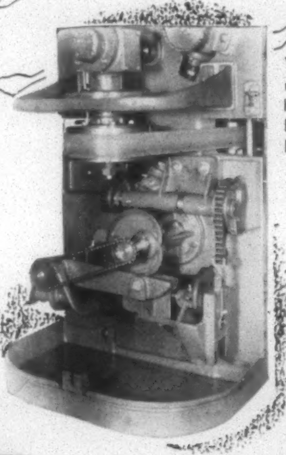
on the Atwood Ring Twister

Grille-ventilated motor, with 3-point suspension and automatic belt takeup, powers single endless, lapless belt which drives 100 spindles at uniform spindle speed.

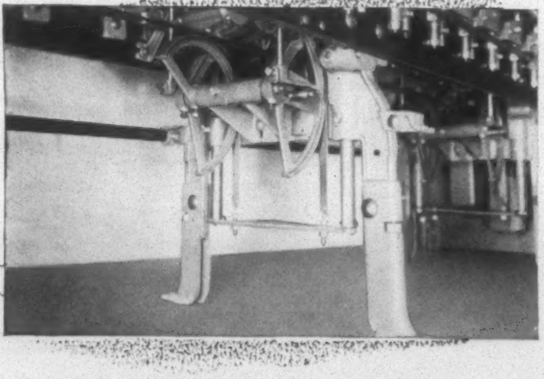




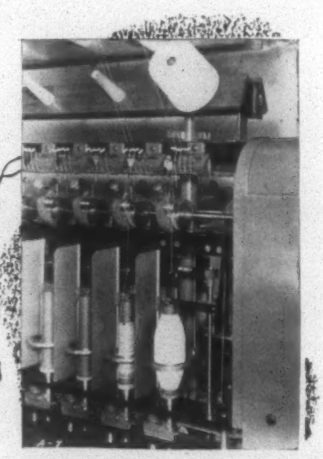
Matched spiral bevel gearing and chain drive give smooth operation of twist gearing. Only one gear to change when changing twist within the range of any twist constant. Geared end is totally enclosed.



Worm and worm gear of builder motion are enclosed in dust-tight housing and operate in oil bath. Eccentric adjustment eliminates backlash.

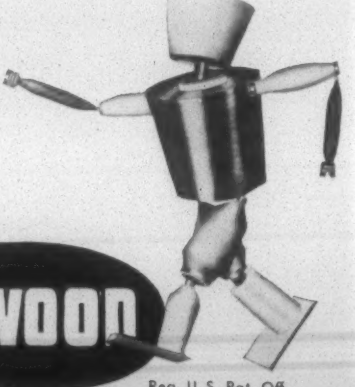


Lifter rod unit produces smooth ring rail motion. Segments, spring steel straps and lifter rods move in vertical line through bearings which are integral part of middle stand.



Spindle is integrally connected with automatic stop motion so knots can be tied in single ends, avoiding roller laps and short plies. Other spindles keep producing.

For doubling and twisting in one operation, consider the many advantages of the Atwood Model 10 Ring Twister. Send for bulletin.



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Manchester, England • Paris, France • Basle, Switzerland. Agents in every principal textile center in the world.

Charleston with twice monthly service to and from the United Kingdom and continental Europe.

Large Package Spinning

LAST YEAR Tallassee (Ala.) Mills, a subsidiary of Mt. Vernon-Woodberry Mills, Inc., at Baltimore, Md., changed over some spinning frames to large package spinning. The work was done by Saco-Lowell Shops.

The bobbins on the renovated frames are so large that it was impossible to reproduce a typical bobbin full size; the accompanying illustration is a reproduction of a package which actually measured 12 inches from top to bottom, and 3¼ inches in diameter.

The Tallassee spinning frames now are equipped with three-inch and 3½-inch rings with five-inch gauge and regular separators. They were equipped with New Era spindles. The traverse is a full 11 inches, and the front roll speed is 186 r.p.m. on No. 8s yarn.

The change-over has been found very satisfactory, and indicated the trend toward larger packages.

B. G. Stumberg is agent at Tallassee Mills, and J. W. Patterson is superintendent. The plant contains a total of 82,032 spindles and 1,755 looms.

Plan Promotion For Saran Monofilaments

Exhilarated promotion of Saran monofilaments was presented to leading textile manufacturers at a preview of the 1948 advertising program by the Dow Chemical Co. and the National Plastic Products Co. in New York last month. Opening a showing of national and business paper advertising, the two companies presented their new theme, "Let's All Call It Saran," in which they have announced the release of the Dow trade-mark Saran now making it a generic term for public use in the United States. Textile manufacturers are expected to use the name Saran in the labeling of their products which embrace furniture coverings, draperies, automobile seat covers, screening, luggage, handbags, and other consumer items.

The National Plastic Products Co., producers of Saran monofilaments and co-sponsor of the meeting, presented a 12-month advertising program featuring actual adaptation of end uses of Saran woven materials. Ephraim Winer, president of the National Plastic Products Co., discussed the progress of the newly organized Saran Yarns Co., which has been formed as a subsidiary of the Dow Chemical Co. and the National Plastic Products Co. for the production of Saran multifilaments.

While National Plastic has been producing monofilaments of Saran, experiments have been going on for some time with the production of multifilament yarn. Some of these have been seen on the market in the form of experimental cloths, made partially of multifilament yarn of this type. Both yarn and short staple, which can be blended and spun with other fibers and woven into textiles, will be made by the new subsidiary, it is understood. The newly formed company is building a plant at Odenton, Md., to spin Saran into fine denier multifilaments and staple fibers. Limited experimental quantities are said to be available. The plant, however, is expected to be in production by the middle of 1948.

Cotton Test Results Listed In Report

The Department of Agriculture, Production and Marketing Administration, Cotton Branch, has issued a 15-page report listing fiber and spinning test results for some pure varieties grown by selected cotton improvement groups from the crop of 1947. The study of the 1947 crop included a total of 86 areas. Many of these areas are the same as those included in the 1946 study, thereby providing some indication of the variation in spinning quality that may be expected from one season to another in the production of cotton of a specified variety in a given locality. In the selection of areas included in the study, an effort was made to include only those that were expected to proluce a minimum of 10,000 bales of a specific variety. Likewise, an effort was made to obtain within each market area the samples for testing from a gin that ginned the specified variety exclusively.

Contents of the report include sections considering selection of areas and samples, test procedures, test results, fiber laboratory test results, processing laboratory test results, basis for interpretation of test results, laboratory measures of fiber properties and their evaluation, commercial classification and processing laboratory tests and their evaluation.

Fibers Used To Produce Synthetic Leather

A serviceable synthetic leather was produced by the Germans from cotton and flax waste, hemp and ramie, according to a report on German wartime developments and applications in the synthetics industry now on sale by the Office of Technical Services, Department of Commerce. The report was prepared by O. T. S. Investigator Arthur Lyem and is based on visits to 27 German plants. The synthetic leather, called *Viledon*, is produced from a fiber fleece base such as cotton and flax waste, hemp and ramie. The main synthetic resin for the impregnation is a polymerisate on an acrylic acid base.

Although a cotton fiber is small enough to go through the eye of a needle with room to spare, it is made up of 35 layers of cellulose.

597,000 Yards
Before Replacement

97,000 Yards MORE Production

CHATHAM slasher cloth

The first accurately checked test run on Chatham 100% Virgin Wool Slasher Cloth showed a production of 597,000 yards before the blanket had to be replaced. This was 97,000 yards more than had ever been gotten by this mill on any other slasher cloth. Later runs in many mills prove that this is not an unusual record for this fine slasher cloth.

Every ounce of Chatham Slasher Cloth is of the highest quality and is built to the same high standards which have made Chatham Blankets, Chatham Upholstery Cloth, and Chatham Homespuns famous throughout the world.

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Warp Preparation & Weaving

Research Methods In Weaving Machinery

By F. M. FITZGERALD, Director of Research, Draper Corp., Hopedale, Mass.

— Before American Association of Textile Technologists —

THIS paper, although entitled "Research Methods in Weaving Machinery," must be confined to the methods used by the firm I represent and is intended to give you an outline of our work and how we go about it. However, our methods are probably not much different from those followed by other manufacturers of weaving machinery or manufacturers of many other types of machinery. Our business is the manufacture and sale of textile machinery and we do research in several fields such as market research, production methods research, etc. These have a definite bearing on this problem of product development, but my remarks will cover only the field of product development and must necessarily be brief.

We have in our engineering and development departments at Hopedale some 100 men employed in product design and development. Of these, 50 are engaged wholly in customer engineering and design, and the remaining 50 are engaged in research and development or experimental projects. This second group of 50 consists of mechanical engineers, electrical engineers, metallurgists, chemists, textile engineers, machine designers, etc.

We maintain a research department in our South Carolina plant which majors in redesign of our older models but which also forwards regular reports and suggestions to the home office for use in the general field of product development. In addition to this group we have various research and design projects assigned to several firms of consulting and designing engineers. One of these is a nationally known Boston firm of designing engineers with a long record of accomplishment in the design of automatic machinery. A second is a firm in New York which specializes in electric and electronic devices but with a large staff of mechanical specialists and metallurgists. A third located in Providence, R. I., is an organization of designing engineers with most of their experience in the textile field. Two other firms are located in Massachusetts near Hopedale, one specializing in electronic devices and the other in mechanical design.

These people work in full co-operation with our Hopedale staff and are used to supplement the latter in order that the Draper Corp. will have as broad a coverage as possible in the general fields of research and development as related to our product.

We also have a group of field engineers and service people who are constantly in search of new developments and new trends, a patent department which investigates all domestic and foreign patents related to our field, and foreign representatives who keep us in touch with developments abroad. We maintain membership in practically all of the engineering societies and subscribe to the various trade publications and the published papers of various research organizations, in order that our people may be well informed.

Information, suggestions and ideas, whether originating within or outside of our organization, are filtered through a development committee which is responsible for the general development program of the corporation. This committee is made up of the president of the corporation, general sales manager, head of the patent department, director of research and the chief engineer.

Once a project is decided upon an engineer or group is assigned to the problem. The engineer or group assigned is given all of the information available at the time of assignment. In the study of the problem these people have available for tools, in addition to patent files and general reference matter, well equipped laboratories for the study of materials, various types of electrical instruments such as the Heiland recording oscillograph, strobolites, high-speed motion picture camera and projector, etc.

Our general procedure is about as follows: Once the problem is assigned the engineer, he studies the information given him. Usually a patent search is made and an effort is made to procure any other data pertinent to the problem. In the case of a design of a new mechanism or redesign of an old one, the engineer presents his ideas usually in sketch form. These are discussed by the development committee in the case of major projects and with other engineers in the division. Once a method of approach is agreed upon parts are designed and made up in as simple a form as possible. A mock-up is usually built. This mock-up is studied with whatever instruments seem best suited.

If parts are subject to severe stresses for instance, the oscillograph is used for strain gauge tests. This instrument is also used for procuring data on instantaneous current and vibration. If timing problem is encountered we probably would use strobolites for study. We find these to be very valuable tools for use in the study of many of the timing problems on weaving machinery. If a wider field is desired than can be followed by the strobolite alone, sometimes photographs are taken. The high-speed motion picture camera is frequently used for such problems as shuttle checking, battery transferring mechanism and moving parts in general. We are currently using an Eastman High-Speed Camera Type III using 16 mm film and running at speeds of from 500 to 3,000 frames per second and find it a particularly useful tool in that it is rather simple to get the pictures and a permanent record is available for study at any time and by larger groups.

After these studies are made parts are either redesigned or put in shape for a running test. Tests are run in the labs in Hopedale up to the point where they show promise enough for a field trial. Field trials are followed by our regular service department with the engineer responsible checking whenever necessary. Our research is conducted for the purpose of developing fabric making machinery which will produce better fabrics at greater production speeds and at the lowest possible operating costs.

Our efforts are directed generally into four channels. These are (1) improvement of the present type of loom, (2) reduction of cost of warp and filling handling (this of course applies to present looms as well as any new development.), (3) design of looms to weave without conventional shuttle and bobbin (4) machinery for production of non-woven fabrics.

Research to improve the present type of looms includes study of new materials and new designs to increase speed, quality of product, reduction of maintenance, etc. In the material field, for instance, we are still trying to find better materials than wood for bobbins and shuttles. Shuttles have been made of various metals and plastics for years and in our laboratories and test rooms we have made countless tests of these materials. We have not yet found one which will stand the test. However, we are still searching, and at this writing are running tests on shuttles of many different plastic materials.

Lay beams have been designed of many kinds of metals in the past. At one time years ago cast iron was used. Many attempts have been made to use folded sheet metals and welded construction. These have all failed and wood has continued to be the material best suited to resist the strains set up in a loom lay beam. However, we have recently produced lay beams of extruded aluminum shapes which promise to replace the wood in most applications. Studies were made of the stresses set up in the lay and from the data gathered an aluminum shape was designed and extrusion dies made. Lays from this shape were manufactured in our shop and put through various tests and strain gauges studies were made. The shapes were modified as a result of these tests and additional tests were made. We now have trial installations in six different mills in the South and one mill in New England, and in every case the reports are excellent. A lot of 100 new machines equipped with aluminum lays is nearly ready for shipment from our shops with more to follow and we believe we have at last produced a metal lay beam for the present-day loom which will stand the strains, weigh no more than wood and not be subject to the known faults of wood. We are continuing with the study of this problem however in an attempt to produce a still better design.

THAT "NEW LOOK" OF STUDEBAKER AUTOMOBILES is even newer since the 1948 models in the Land Cruiser line started wearing nylon. Seat covers made of nylon and nylon cord tires for cars were introduced in 1947, but the 1948 Studebaker is the first to take advantage of nylon's resistance to soilage and wear, and its ease of cleaning. Nylon is standard on the 1948 Land Cruiser. The fabric, known as Candalon, is manufactured by the Collins & Aikman Corp. of Philadelphia. Designed by John Repp, it is a Bedford cord fabric decorated with pile stripe, which is characterized by ease of sliding and a distinctly new, colorful appearance.

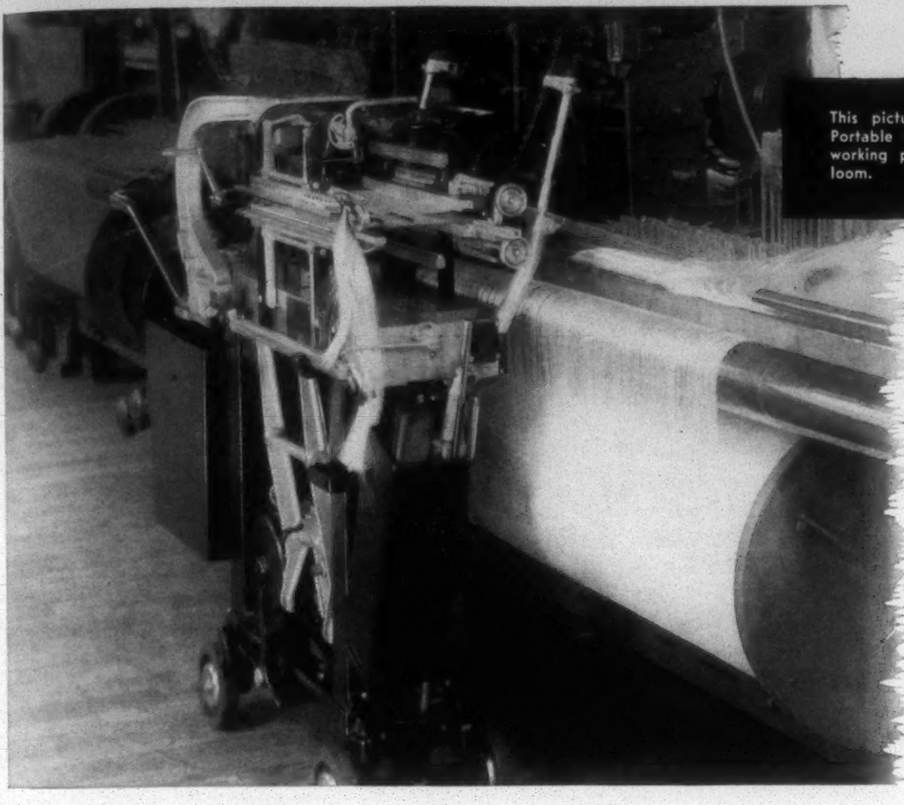
Studies are being made of the use of new materials for many moving parts in attempts to reduce wear, power consumption, etc. The use of light metal, such as aluminum and magnesium alloys, in all reciprocating parts to reduce vibration, stresses, etc., is promising. We are fully aware that the present crank throw and reciprocating lay at present day speeds is causing mills some concern. One of our projects is an attempt to eliminate this motion.

New methods for throwing or picking the shuttle and checking its flight are being explored constantly. The strobolite and high-speed motion picture camera have become most useful tools in the study of this problem. A shuttle check device which is simple, inexpensive and more efficient than the commonly used check strap and which eliminates these check straps, shows considerable promise on several of our test machines. A parallel motion which will not allow picker jump, and will provide more positive shuttle flight, and cannot be adjusted by loom fixers and weavers to suit their whims shows promise in our laboratory tests and in field trials. A let-off motion with fewer parts and one which will provide uniform warp tension from full to empty beam is showing up well in field trials on goods ranging from surgical cottons to high-grade satins and taffetas.

The commonly used electric warp stop motion is of course well known and electric filling feelers are used to some slight extent. New designs of these devices are part of our experimental program. Other electric and electronic applications which are being worked out in our laboratories are such problems as push-button starting and stopping to eliminate driving clutches and shipping parts, electric protection means to eliminate the troublesome bang-off condition we now get when shuttles do not box properly, electric filling stop motion, electric warp let-off controls. In fact practically every motion on the machine is being studied with the application of electric and electronic controls in mind.

Studies are being made to determine the requirements of loom motors and the speed and current fluctuations because of varying loads.

Completely enclosed mechanisms such as let-offs, take-ups, harness motions, etc., guarded for cleanliness and also sealed into oil baths for lubricating purposes have been designed many times and can be at any time in the future. Up to this point, however, they have not been found of great value in producing more or better cloth or reducing operating cost of the machinery. These examples are only some



This picture shows a Barber-Colman Portable Warp Tying Machine in the working position, directly behind the loom.

BARBER-COLMAN WARP TYING MACHINES ARE BACKED BY 40 YEARS OF EXPERIENCE

DESIGN. Shortly after the turn of the century, Barber-Colman introduced several machines which have proved to be outstanding contributions toward improvement in the textile art. Among them is the Portable Warp Tying Machine, specially designed to work directly back of the loom. This machine is so light in weight as to be easily and quickly transportable from loom to loom throughout the weave shed.

REPAIR PARTS. As on any machine, certain parts in time show wear and must be replaced. Modern manufacturing methods set up standards and tolerances for the making of these parts so that any replacement is exactly interchangeable with the original piece. Barber-Colman Company maintains a skillfully-staffed department to make and stock those units which, experience shows, are in most demand. In addition, supplementary stocks are maintained at the company's branch offices to provide best-possible delivery from strategically-located centers.

SERVICE. No machine made can function without Service. Experienced Service Men must be available to explain and demonstrate the working of the machine when it is delivered, and must be on call if trouble develops to determine the cause of any failure, make necessary adjustments, and revitalize the productive functions of the machine. There are Barber-Colman men ready and willing at all times to answer promptly any call for assistance, and to make sure that Barber-Colman machines are on the job as near 100% of the time as possible.

These pictures, taken in the Barber-Colman plant, show a few of the skilled mechanics whose experience and aptitudes contribute vitally to the quality and performance of Barber-Colman machines.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

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FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND of the projects underway constantly in the attempt to refine the present-day loom.

The second channel, the reduction of the cost of materials handling has generally three divisions; namely, increase in the size of the warp package, increase in the size of the cloth package and increase in the size of the filling package as well as elimination of the handling of the filling package. For a long time we have been actively engaged in the design of a hopper and conveyor means for automatically replenishing the filling bobbins in the loom battery in order that the present cost of battery tenders might be reduced. The design in general consists of an automatic hopper stationed at one end of a weave room with conveyor means to a quantity of looms. An indication from the feeler of any loom in the group would work the hopper mechanism and cause a new full bobbin to be conveyed to the battery of the loom, making the indication to replace the full bobbin transferred to the shuttles.

An experimental installation on 12 looms in a neighboring cotton mill is not operating satisfactorily up to this time, but we continue in our efforts because we believe that once solved this device will practically eliminate battery tenders in those mills where one or a few different filling yarns are used on a quantity of looms, and should not be an expensive installation.

Warp beams continue to grow in diameter. Where 18 and 20-inch diameters used to be fairly standard we now have 26-inch diameter as standard with 32-inch diameter not uncommon and 48-inch diameter being used experimentally. Every increase in size introduces a problem in mounting and let-off control. Experimental installations of 32-inch warp beams mounted above the loom are now in some mills.

The third channel is the design of a loom to weave without the conventional shuttle and bobbin, the so-called shuttleless loom or loom to draw filling from an outside source. Shuttleless looms are not new. The problem of weaving without the expense of shuttles and bobbins and without the expense of winding and handling bobbins has always intrigued weavers and inventors. We have had many in our plant in the past and in fact have some of new design running and producing cloth at this moment. To design and run a shuttleless loom in a laboratory is not too difficult. But to design such a machine which will produce cloth at the same or lower cost per yard than the present day high-speed fly shuttle loom is a far more complex problem. Our engineers are actively engaged with this and much of our research effort is being spent in the work of developing a loom to take filling from an outside source and which will at least equal the fly shuttle loom in efficiency and which can be marketed at a price to make the investment in this type of machine a profitable one.

The fourth major channel which our research is following is in the development of a machine to produce fabrics of unspun webs with fibers crossing each other in layers—the so-called cross lay machine. Much is being heard these days of non-woven fabrics and naturally the manufacturers of weaving machinery are interested in this development. We have been working on this problem since before the war started. We have running a laboratory mock-up which will cross lay unspun webs of many types to produce non-woven fabrics with equal strength in two directions. The present machine is a crude laboratory model producing fabrics 20 inches wide but from our experimental work with it, we know we can successfully cross lay webs. Based on our experiments the design of a new machine to produce fabrics 40 inches wide is now practically complete. We hope to have this machine built this summer. Whether it will be a success as a machine remains to be seen and whether it will be economically practical is another question.

This is a brief outline of some of our research projects. There are others which I have not discussed. It should in no respect be considered in any part as a prediction of new developments to be placed on the market. It is our belief that some of the projects mentioned here will reach the production stage and be of real benefit to the industry. Others will undoubtedly wind up in the waste basket. The business of fabric production is a large and complicated one as you well know and this paper I hope has given you a quick picture of the efforts of one firm to retain leadership through research.

Looms For Britain's Cotton Mills

By R. H. FRY

BRITAIN'S textile production has recently improved month by month. But the textile industry is hard up for labor, and it needs so many additional workers to produce all it could sell that the prospect of getting enough manpower is small. The cotton industry, in particular, is still producing about one-half of the pre-war volume and exporting about one-third. Even after the effort planned for the next 12 months to increase output and to shift de- did in 1938, which was a bad year. The situation is exas- liveries from home to export trade, Lancashire will be exporting at the end of 1948 only 70 per cent of what she perating to the manufacturers, to the government, and to the public.

If Britain were exporting as many textiles as she did in 1937 she would earn something like £300,000,000 ($1,200,000,000) more in foreign exchange, which would close more than half the present gap in the balance of payments. The world demand for British textiles is still strong and price competition is not yet affecting it. The cause of the dilemma is, of course, the conversion of cotton mills into munition factories during World War II. The skillful working population of the textile towns was a precious war asset, and as textile production and exports were cut down to a minimum, mills and public utilities were standing ready to be turned to war use.

At the end of the war most of these factories did not

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When our customers think of STEIN-HALL some see laboratory smocks microscopes and rubber gloves...and some see pin-stripe suits, brief cases and order pads.

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close down but turned from making aircraft parts, shell fuses, or other military equipment to the manufacture of general engineering products, for which there was an enormous demand both at home and abroad. The labor stayed in the cleaner and more interesting engineering jobs, and the cotton mills never got their old labor force back. A good deal is being done to remedy the stuation—recruiting campaigns, enlistment of displaced persons from Europe, direction of workers from less important industries, and a very great improvement in working conditions and amenities. But while all these efforts are having some effect, it is generally recognized that the principal source of greater production must be a better use of the present labor force.

Many separate trends are being followed—installation of new and improved machinery; scientific analysis of labor costs for each operation; new distribution of labor and machinery inside the mills, and shift-working. In every one of these efforts progress is being reported at frequent intervals. And yet the total effect remains relatively small. The sort of dilemma in which the industry is caught in all its progressive efforts comes out clearly in the report of a committee set up some months ago to investigate the supply of cotton textile machinery. The committee sat under the chairmanship of Lord Justice Evershed, who has had long experience of the cotton industry. It took as a starting point the agreed needs of the cotton mills for new machinery and plant which were out in a joint inquiry by government and industry in 1946. That inquiry had found the most urgent need in a conversion from non-automatic looms to automatic looms. The British cotton industry still does by far the greater part of its weaving on hand looms, which produce a better quality for many purposes but need more labor per unit of cloth. It was agreed that the industry needs 120,000 new automatic looms in the shortest possible time, which was taken as six years.

Loom Problem

Excellent automatic looms are being manufactured in England, but not enough. Present production is between 4,000 and 5,000 looms a year, and when plant extensions now in hand are completed the output may rise to 6,000 looms a year. Nearly one-half of these are being exported and many more could be shipped abroad if a fixed proportion had not been reserved for the mills at home. The Evershed Committee went carefully into the problem of getting a supply of 20,000 looms per annum for the next six years out of a productive capacity slowly rising to 6,000 looms a year. It ruled out imports because there are no large supplies to be obtained and the hard currency for payment could not be spared. The proposal is, therefore, to try a new type of expansion. "The situation requires a more rapid deployment of productive resources than ordinary business can achieve," states the committee, "and we believe that the requisite production of automatic looms can only be achieved by the application of some scheme of manufacture similar to that which was applied in the war to the production of munitions, such as the Lancaster bomber."

The Evershed Committee suggests that the British Government should help with priorities for factories, plant, equipment and labor; the present manufacturers seem to be willing to place their designs and know-how at the disposal of a new set of factories, and to help in managing them. The scheme would require agreement on one or two types of standardized looms and the establishment of flow production from the basic components to the assembly of the finished loom. As the greatest obstacle to the expansion of output by the present makers is the shortage of foundry capacity, and even more of foundry labor, the committee suggests that a new mechanized foundry should be laid down for the job.

All this sounds as if it were exactly the sort of thing that Britain needs. And yet the reports of the Evershed Committee has been received by the press and by everybody in the cotton industry itself with the unanimous comment—"not a hope." The fact is that Britain has got to cut down the use of labor and of steel for the building of new factories and the re-equipment of her industries. In the recent decisions on capital investment in 1948 the government has called for an increase in the production of general plant and machinery by ten per cent next year, but at the same time the production earmarked for export is to be increased by more than 40 per cent so that the home market will get much less equipment even than the present modest rate.

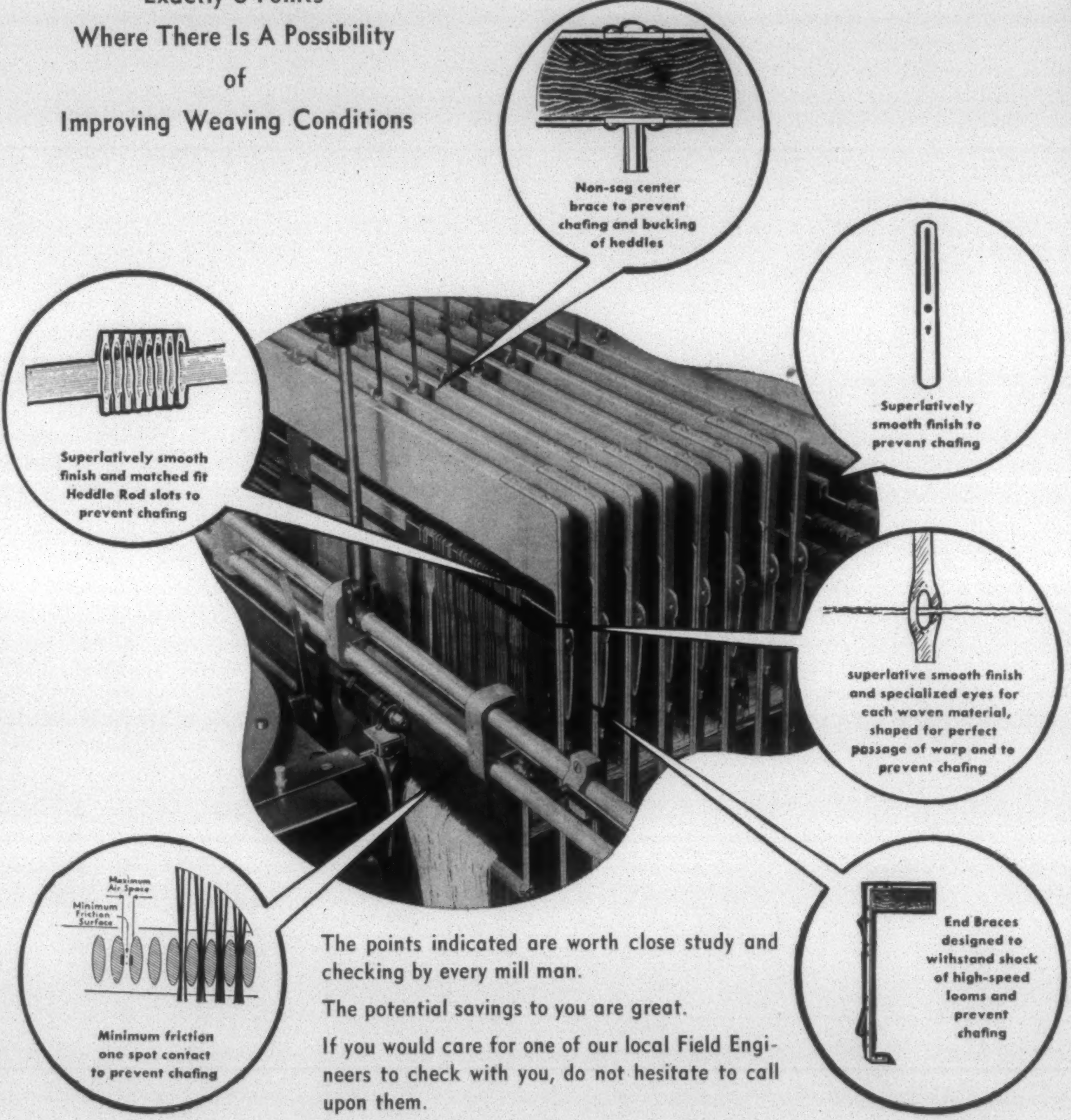
Ready for Action

Moreover, the cotton scheme would be impossibly expensive in present conditions. New factories could only be erected and equipped quickly by paying top prices, and the same is true of attracting labor and management personnel from other industries. In short, the rapid re-equipment of Britain's cotton weaving industry with automatic looms is the sort of scheme with which everybody agrees but which, in the present position of the country, has to be postponed. What emerges out of all these plans that are now being made for a variety of industries is a large backlog of carefully worked out re-equipment plans which can be taken in hand as soon as the pressure on Britain's resources begins to slacken.

Tariff Commission Reports On Cotton Cloth

THE United States Tariff Commission has issued a report on cotton cloth, one of a series on War Changes in Industry, which the commission is preparing at the request of the House Ways and Means Committee and the Senate Finance Committee. The report reviews the position of the cotton manufacturing industry relative to all industries, the changes in the industry's capacity over a period of years, and its accomplishments during the recent war years. It

Every Mill Has
Exactly 6 Points
Where There Is A Possibility
of
Improving Weaving Conditions


Non-sag center brace to prevent chafing and bucking of heddles
Superlatively smooth finish to prevent chafing
Superlatively smooth finish and matched fit Heddle Rod slots to prevent chafing
superlative smooth finish and specialized eyes for each woven material, shaped for perfect passage of warp and to prevent chafing
Maximum Air Space
Minimum Friction Surface
Minimum friction one spot contact to prevent chafing
End Braces designed to withstand shock of high-speed looms and prevent chafing

The points indicated are worth close study and checking by every mill man.

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also discusses competitive conditions arising from factors which have an effect on the domestic output and the foreign supply.

The manufacture of cotton cloth is one of the largest industries of the United States. The output of cotton cloth from 1929 to 1939 averaged about eight billion square yards, valued at about 800 million dollars, per year. In 1937 and 1939 production reached a total of about nine billion square yards, and in 1942 it reached a peak of over 12 billion square yards. This increase was accomplished chiefly by the greater utilization of machine capacity through the employment of extra shifts. The rate of employment in 1942 was equivalent to about 2¾ shifts of 40 hours per week, and in 1946 to about 2 1/3 shifts per week.

The price of raw cotton represents, on the average, about one-half the price of cotton cloth sold by the mills. The remainder constitutes the mill margin, that is, the sum available for manufacturing expenses (including labor), selling expenses, and profit. Generally the price of cotton cloth has fluctuated with changes in the price of raw cotton. Formerly concentrated chiefly in New England, the cotton goods industry gradually shifted to the cotton-growing states, principally the Carolinas, Georgia and Alabama. In 1939 the cotton-growing states processed about 85 per cent of the cotton consumption and supplied cloth valued at about three-fourths of the total value of cotton broad-woven goods produced in the United States.

The mills engaged in the manufacture of cotton cloth have undergone little change since 1939. There has been little new investment and only a limited quantity of new machinery has been available. Measured in terms of spindles in place, capacity at the outbreak of World War II was less than in 1910 and about one-third less than at the peak in 1925. Consequently the desired increase in wartime production could be obtained only by the additional hours of operation.

As regards the long-term post-war position of the cotton manufacturing industry throughout the world the report points out that when equilibrium in world supplies of cotton cloth has been restored, the most important factors (apart from the general level of world prosperity) which will affect the volume of international trade will be the extent to which various countries, which formerly imported cotton goods, succeed in expanding their own spinning and weaving industries, and the extent to which rayon displaces cotton.

The long-term post-war position of the domestic cotton goods industry will depend on the extent to which capacity has been expanded in the immediate post-war period and on the course of the per capita consumption of cotton cloth when wartime shortages have been removed. The combined consumption of cotton and rayon cloth, in turn, will depend on the level of national income and the share going to the lower income groups in which the consumption of cloth might be considerably increased. The extent to which cotton cloth may have to share the market with rayon will be determined largely by the relationship between cotton and rayon prices. However, inasmuch as it is generally possible to adapt machinery in cotton mills to the use of rayon and other synthetic fibers, competition from rayon will affect the grower of cotton more than the manufacturer of cloth.

Imports represent a small proportion of the total supply of cotton cloth in the United States. Imports have been mainly from the United Kingdom, Japan, Switzerland and Belgium. At the peak of 1937, imports of cotton cloth (mostly bleached fabric of print cloth type) from Japan constituted only about 2.5 per cent of the total United States production of print cloth, but a much larger proportion of the supply of bleached print cloth. Imports from the United Kingdom customarily include a wide variety of fabrics from coarse yarn cretonnes to fine lawns. Imports from Switzerland include chiefly fine yarn fabrics such as voiles, organdies, typewriter cambrics, and dotted swisses. From Belgium imports were primarily bed tickings (plain and jacquard-figured) and non-jacquard upholstery fabrics. Imports of cotton cloth from Mexico have been mostly for ultimate sale to Central and South America after bleaching, dyeing, and finishing for re-export.

United States exports of cotton cloth have been much larger than imports. In 1920 exports reached a peak of nearly 820 million square yards. They declined to about 184 million square yards in 1935, but later recovered in part, amounting to 359 million square yards in 1939, increasing to 775 million square yards in 1946.

World trade in cotton cloth was declining for a number of years before World War II. India and other countries which were once important import markets were gradually developing cotton manufacturing industries of their own. As the production of cotton cloth in the United Kingdom and in the regions under enemy control decreased after 1939, it increased in the United States, India, Brazil, and in other countries. For the first time India, Brazil and Mexico became net exporters of cotton cloth. A number of countries, particularly the United Kingdom, Japan, Italy, Belgium, and the Netherlands, have found exports of cotton cloth to be of vital importance to both the cotton manufacturing industry and the national economy. It is to be expected, therefore, that these countries will endeavor to recover and even enlarge their former markets, especially since they will need foreign exchange to purchase abroad essential supplies.

The report includes a section on the tariff problem with respect to cotton cloth, especially as that problem may appear after the present world shortage of cotton goods has been overcome. It sets forth considerations bearing on the appropriate degree of protection for the domestic industry, and discusses the prospective future relation between domestic and foreign costs of production as well as the probable future competitive position of such countries as the United Kingdom, Japan, India, Brazil and Mexico in the American and foreign markets. The relationship between tariff rates on different grades of cotton goods is likewise discussed. Because of the complexity of the tariff on this product, it is difficult to make a direct comparison between the different rates in force over a period of time. Under the act of 1913 the rates of duty, weighted on the basis of actual imports, averaged 22 per cent ad valorem and about 29 per cent under the act of 1922. Under the act of 1930 (to the end of calendar year 1946) duties on cotton cloth averaged about 27 per cent ad valorem. Since the act of 1930 went into effect several modifications have been made in the rates on cotton cloth. In 1936, following a large increase in imports from Japan, the rates of duty on plain bleached, printed, dyed, or colored cotton cloths of medium yarn numbers, were increased about two-fifths, and the

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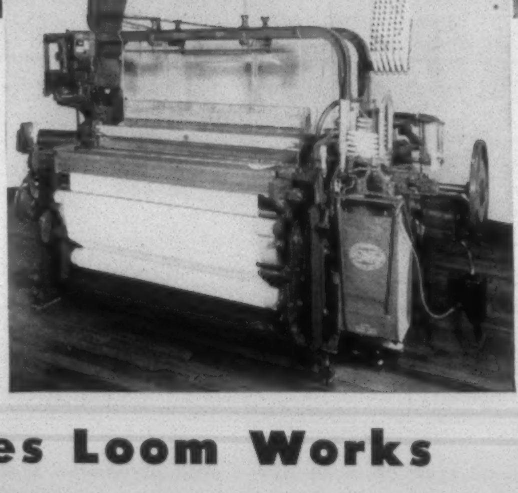

Crompton & Knowles Loom Works

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duties on certain cotton items, mainly high priced goods and specialties, were reduced by one-fourth in the trade agreements with Switzerland (1936) and the United Kingdom (1939).

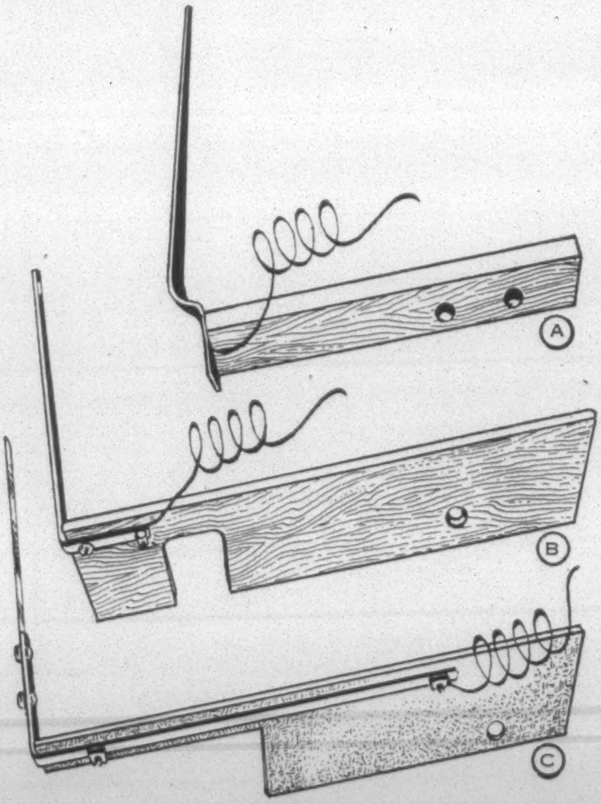
Subsequent to the time that the commission's report was sent to the printer the President has proclaimed further reductions in the duties on fine yarn cloths as a result of the Geneva conference. The reductions on the fine cloths averages about 15 to 20 per cent. The new rates became effective Jan. 1, 1948. Copies of the report on *Cotton Cloth* may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at 40 cents a copy.

EVOLUTION OF AN IDEA

Part Two of a Series by H. E. WENRICH

AS machinery improves, it would appear that the room for betterment would get less. Betterment usually consists of some simple little gadget affixed in some manner to improve output or the product. As an example, the center filling stop-motion was an idea to take the place of the side filling motion on weaving machinery. This complicated gadget as at first designed, was rather a crude affair. But time passed by and many fixers and weavers and other weave room personnel started tinkering around on center stop-motion improvement, until today's modern loom, with its excellent center stop-motion, would be expected to be as nearly perfect as posible to achieve.

In keeping with the objective of producing more cloth in less time at reduced costs, loom builders are ever constantly tinkering with their machine, including the center stop-motion. You may have an idea so vastly better that it would become a must item for future installation on their looms. If you have such an idea, don't let it wither away for lack of light. Your ideas are of little value if kept locked within your mind. Even though you bring it forth and blossom that idea into a useful gadget and then receive no conceivable compensation for it, some time in some manner, you will benefit by it.



Three stages in development of the author's gadget.

The writer, being interested in veteran affairs, once was button-holed by a fellow member in our local veterans' social rooms. For sake of comprehension, let us name this chap "Bill." Bill was very secretive and tactfully eased into a corner. Bill confided in me, "I have an invention that will more than triple the amount of shell casings output on my machine, but I don't want to take it to Washington as the lawyers may steal it." My veteran friend's mistrust was really amusing. In his mind, his wonderful idea had not only been materialized into a workable gadget, but also into a bogie that kept haunting him with Jezebels. His idea, gadgeteered into a workable device, and applied to a certain line of machinery, would jump production several times over expected capacity. It was an excellent idea according to Bill, and really must have been attached to his machine secretively. Within a few hours run, Bill could produce a full day's production. Others were kept in the dark as to his working abilities, as the gadget would be removed in sufficient time to prevent others viewing it providing co-workers started in Bill's direction. It was generally known that Bill could turn out more shell casings than any other worker in the plant, and his earning ratio on that type of machine was greater than others.

But poor Bill. He never trusted company officials, lawyers nor anyone else. He came to me solely for the reason that he knew I had several patents on textile improvements. What Bill did not know, was the fact that I actually lost money on the patents and promotion, and after they expired, many of the claims have been incorporated into workable devices used by many textile firms throughout the country. But in the end I have profited. Those patents expiring allowed others to work along similar lines and my present job has been made more comfortable surrounded by the basic idea first conceived by me. Poor me? No, poor Bill! For if he would have shown his new gadget working, more shells would have been turned out, not only on his machine, but hundreds of other like machines. And we would have had more of what our armed forces needed when it was needed the most.

On many ideas, others are working along somewhat similar angles. In fact, your idea may be new to you, while at the same time, the exact type of gadget may be in use in some other plant, conceived by some other person. Many thoughts travel on the same thought length. Call it what you may, your thought may be locked with another persons thought, and if you keep your idea locked in the vault of your mind, the other fellow may beat you to profiting from its use and disclosure.

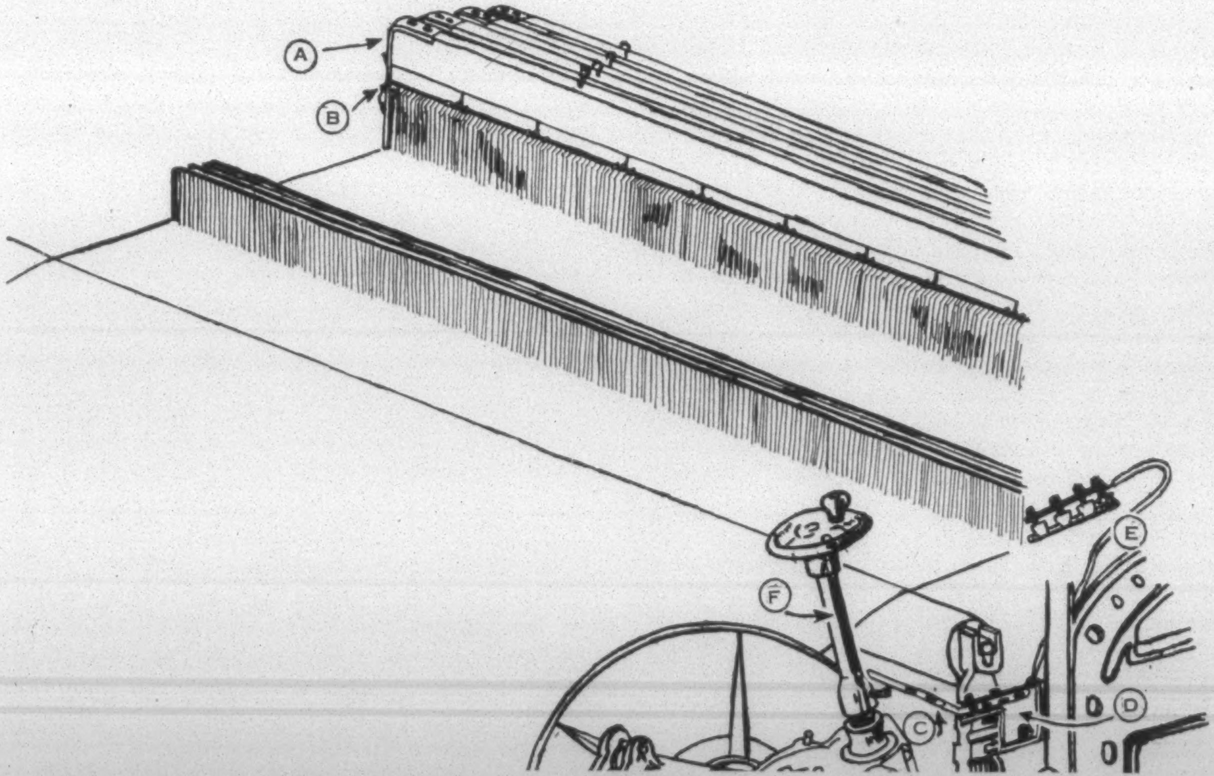
For regardless of how secretive an idea may be, or how well hidden that gadget may be, in time, all secrets blossom forth. If your idea proves to be a gadget well worth laying cash on the line for a patent, if you desire, you still have a year in which to apply for a patent after publication or sale. So if that gadget is found useful and indications are that you have a possible money maker, there is still sufficient time to put up the required capital for further protection.

Just take a look at the illustration showing the placement of a finished device as applied to the Crompton & Knowles let-off. This is a very simple gadget to make. It required thought, however, in ripening it to a satisfactory device that wouldn't appear too conspicuous or cumbersome on a weaving loom. Have you ever worked on a C. & K. let-off? If you have, you can realize why the gadget was conceived. On the C. & K. let-off, if the plunger rack is somewhat blurred or the handwheel shaft bent, the handwheel pinion will be retarded in its proper movement and the motion will creep forward. This allows the handwheel shaft to bear against the whiproller on the short length warp brackets, or jam into the warp drop wire bracket heads on long length warp brackets when the drag roll is positioned behind the let-off. As the loom continues in operation, the handwheel shaft becomes bent or breaks, and in addition, the fabric will be badly damaged with a heavy tight mark and broken warp ends. This breakdown will eventually cause the loom to slam off.

On a loom break, the fixer may require 15 minutes to adjust back to normal. Or it may require several hours on a bad warp smash. The reed cradle may lock behind the cradle control device and become a cause for dirtied cloth. And after adjusting, the cloth will have an imperfection and the whiproller or drop wire motion severely damaged. Cost may amount to several dollars in repairs, not counting lost loom nor defective cloth, nor lost earnings to the weaver if on piece work.

What started the writer on the original idea? A cotter key on the drive rod broke and the drive rod came up off the stud, allowing the handwheel to jam against the drag roll. Quite a bust out! But after a week of many somewhat similar breaks, the gadget was the outcome. The first model (A) was merely bolting a short length of discarded pick stick to the whiproller support, attaching a short length of wire to the warp drop-wire head, and running the opposite end of the wire to a binder spring attached to the wood stock. Thus when the handwheel started to creep towards the whiproller, at a certain determined distance, it would come into contact with the binder spring, forming the circuit and stopping the loom through the drop-wire motion circuit.

Wonderful gadget, isn't it? Stops tight marks — stops broken ends—stops damaged whiprollers—stops broken drop-wire brackets—stops broken handwheels—stops loom shutdowns—stops fixer calls—stop, stop, stop loomfixer for a little breathing time! But why stop here? The gadget just looked a little too crude. Not quite finished. So a second model (B) was made on the pattern as shown, from a discarded harness shaft. Every twisting department has a large number of discarded and broken shafts. End pieces make excellent segments for the gadget. One end piece was cut from the shaft and the two screws used to attach it to a section of the wood shaft now used as insulation in place of the wood pick stick section. Better? You said it!;



A, steel end cut from discarded shaft below spring two-inch by six-inch angle; *B*, use five-inch length of heddle ribbon; *C*, "contact" end of gadget; *D*, fastened to bracket; *E*, electric wire fastened to electrode holder; *F*, handwheel shaft.

looks better, was better. Costs nothing as the materials were secured from the discards—even the insulated wire being garnered from the debris.

But on the loom, the more you looked at the second model, the more you realized something was lacking. Get the gray matter working again. Imagination! Concentrate! Can you see the logical reason for a change? It required another day for the final answer. Now look at gadget number three (C) and you will see the big improvement as it should be.

That second model shows a faulty structure. As the handwheel shaft creeps into contact with the metal strip to form the circuit, supposing the warp stop-motion fails to work? The knock-off lever may be worn; the thermal cut-out may be on safety due to a short; the switch damaged or some other break prevent proper action. The shaft continues in motion and presses against the strip, bending the metal or breaking the wood insulation formed from the harness shaft. Also, when a warp runs empty, loom cleaners usually run the handwheel close to the top drag roll to loosen warp yarn on the beam so it can be cut free. The metal strip is then bent back under the drag roll and out of possible position where it can contact properly. When the new remount is in the loom and weaving, the chances are that the gadget will fail to work until a break occurs and the fixer re-adjusts the device.

So the improved model on the third try eliminated all the foregoing faults. Notice that the insulation is made from composition board; or plywood can be used very satisfactorily. The metal strip from the harness shaft is reversed, extending further in towards the loom frame, strengthening the unit and requiring less insulated wire. But the main improvement on number three that was lacking on number two, is the addition of a springy segment that returns to original position if bent away from the true placement. This springy segment was made by cutting a five-inch length from a discarded shaft ribbon and riveting it to the metal shaft segment.

Also shown is the gadget attached to the warp stand and wired to the warp drop-wire head. One bolt is sufficient to attach the gadget into position. Simple, isn't it? You can make it. Anyone can make it. Go right ahead and make one for each loom equipped with the C. & K. let-off. A similar device can be used for the A. & B. let-off, or any other type of let-off using the same principals of operation. You can now duplicate the gadget for five cents or less. Make it from discards and it costs you nothing.

An idea can be worked into a useful gadget regardless of what job you may be holding down. Take this let-off safety detector as a starter. With several let-offs creeping each week, weights rising up and sticking over the beam flange and the piston coming up out of the pot, sufficient work is made for several fixers in place of but one on a section of 40 looms. Time to start doing something—for when a fixer is tinkering and puttering around and the section running, only then is the production really tops.

This safety detector idea popped up suddenly. "Why not let the electric warp stop motion stop the trouble?" So with wishful imagination, an idea blossomed forth into a successful and useful gadget. Take a second look at the final device. If a short handwheel is used in place of the long handwheel, the contact end of the gadget must be placed lower. This can be arranged in several ways; the springy segment can point downward or upwards and positioned in such a place so the let-off housing will contact as the motion creeps forward. This is all possible and shows the path of an idea—for even if the handwheel should come loose and drop off, the housing will contact the spring segment, circuit and make positive contact regardless. If you are a fixer having trouble with such breaks, see what you can accomplish in devising a gadget to suitably control such a break.

Fixing on C. &. K. looms? Too many weights lying around the floor? Then make a weight stacker to keep the weights in a neat uniformity. A length of pipe welded to a flat steel base makes a suitable stand to pile unused weights nearby. Fixing on Draper looms? Loop pickers hard to knock off? Merely fashion a suitable length of pipe to fit up through the lay slot to be used in knocking off the pickers from below.

Anyone can contribute towards increasing the efficiency of his job. Just get down to earth and get the gray matter working during working hours or at home during leisure time. It is surprising what an ordinary person can think up, and when that make-it-yourself gadget takes form, what a thrill in the accomplishment! The first arrangement may be crude, but the second, or the third, or even further attempts will blossom that idea into an essential gadget that will be *it!*

"Bill?" Oh, yes, I nearly forgot Bill. His former employers also forgot Bill. Perhaps if he would have manifested his ability to think an idea into a gadget, he would have been promoted or rewarded with solid compensation in showing his successful gadget. At least, he would have been retained as an idea man when conditions required shutting down the shell plant. Today, Bill is checking in a grocery store, having spent his $30-a-day earnings in sporting around.

New Bedford Alumni Plan Celebration

At a recent meeting of the New Bedford Textile Institute Alumni Association at Boston, Mass., a committee of prominent mill men made plans for the observance of the 50th anniversary of the opening of the textile school. The occasion is to be observed in May of 1948. The date of this important event will be announced later.

During the passing of years and the many changes of addresses, the graduates of this great school who have not recently received association notices are requested to send present-day addresses to any of the officers: Edmund Dupre, corresponding secretary, N. B. T. I., New Bedford, Mass.; Howard Bates, 53 Chestnut Street, New Bedford, Mass.; Francis Tripp, N. B. T. I., New Bedford, Mass.; Harold Sturtevant, vice-president, 44 Brookside Road, Cranston, R. I.; and John H. Grady, president, 35 Hartford Street, Boston, Mass.

The Philadelphia Textile Institute is conducting a drive to raise funds for its projected new home at Henry Avenue and West School House Lane. Col. Millard D. Brown, president of Continental Mills, in appealing for support of plans for the new buildings, warned that technological improvements and more efficient and highly-trained personnel are needed to ward off a grave threat to the textile industry presented by depreciated foreign currencies and lowered tariffs.

Maintenance & Engineering

The Electrical Code And Textile Mill Wiring

Part Six of a Series by JAMES T. MEADOR

THIS month we dig more deeply into the various phases of the code which are quite important in such work and to such operations in which you become involved around any progressive textile mill, which is a sure sign of progress. And, believe me, the textile industry as a whole is going forward toward modernization in every phase; there are a thousand and one reasons why we should go along with this advancement. This issue's article is devoted to a discussion of Article No. 380 of the National Electrical Code (switches).

Section 3801, Grounded Conductors: No switch or circuit breaker shall disconnect the grounded conductor of a circuit unless the switch or circuit breaker simultaneously disconnects the ungrounded conductor or conductors, or unless the switch or circuit breaker is so arranged that the grounded conductor cannot be disconnected until the ungrounded conductor or conductors have first been disconnected. In other words, a switch or circuit breaker must not disconnect the grounded wire unless it at the same time (instant) also disconnects all the other wires; or, said switch or circuit breaker must not disconnect the grounded wire until after it has first disconnected all the other wires.

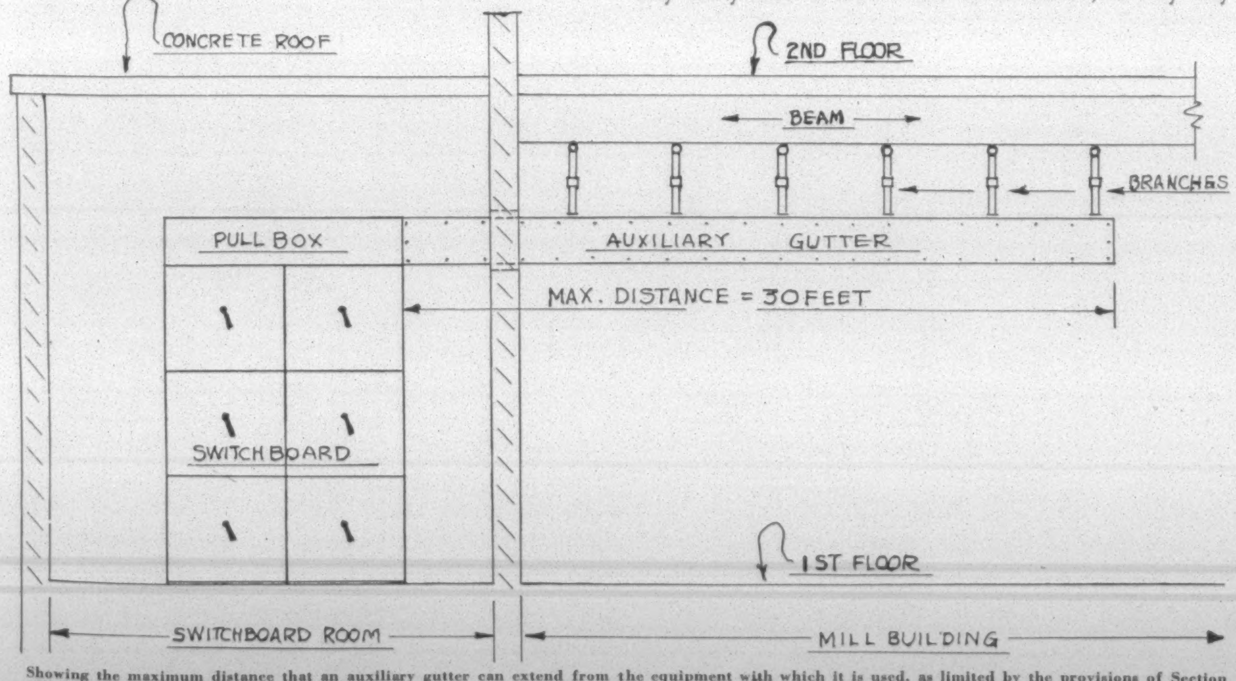
Section 3802, Three-Way and Four-Way Switches: Three-way and four-way switches shall be so wired that all switching is done only in the "hot" or ungrounded circuit conductor (wire). Wiring between switches and outlets shall, if in metal enclosures, be run with both polarities in the same enclosure.

Section 3803, Enclosures: Switches and circuit breakers, except pendant and surface type snap switches and knife switches mounted on an open face switchboard or panel board, shall be of the externally operable type enclosed in metal boxes or cabinets.

Section 3804, Wet Locations: If a switch or circuit breaker is in a wet location, or outside of a building, it shall be enclosed in a weatherproof enclosure or cabinet installed to conform to Section 3732 (see January, 1948, TEXTILE BULLETIN).

Section 3805, Time Switches, Flashers and Similar Devices: Time switches, flashers, and similar devices, unless mounted on switchboards or control panels, and if not in approved individual housing, shall be enclosed in metal boxes or cabinets, but, need not be of the externally-operable type.

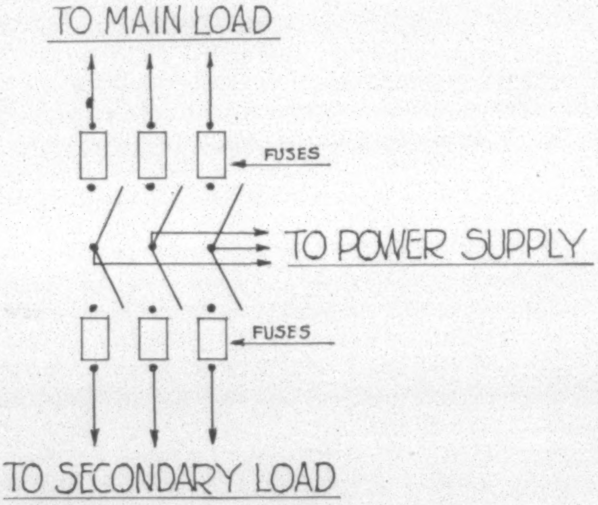
Section 3806, Position of Knife Switcher: Single throw knife switches shall be so placed that gravity will not tend to open them. Double-throw knife switches may be mounted so that the throw will be either vertical or horizontal, as preferred, but, if the throw be vertical, a locking device shall be provided which will insure the blades remaining in the open position when so set. You will note that we have mentioned "double-throw" switches in a brief way; they really deserve much more consideration, as they may



Showing the maximum distance that an auxiliary gutter can extend from the equipment with which it is used, as limited by the provisions of Section 3742, National Electrical Code.

be used to fulfill a world of requirements, sometimes in the most unusual places. One place I have in mind where the double-throw switch has been used to a real advantage is at the American Plant of American Yarn and Processing Co., Mt. Holly, N. C., in the mercerizing room. One double-throw switch was used on the control panel of each mercerizing machine, where each panel was composed of a group of fusible combination magnetic starters with this double-throw switch so arranged and installed as to permit an instant changeover from one set of controls to another set in case of any trouble developing in either set. This arrangement has for the past several years afforded trouble-free operation of these machines to such an extent that the switches have paid for themselves many times.

Section 3807, Connection of Knife Switches: Knife switches, unless of the double-throw type, shall be so connected that the blades are dead when the switch is in the open position.



Sketch showing use of a double throw switch as a separating switch to prevent secondary or "off-peak" loads from being thrown on the line at the same time with the main productive load in your plant to avoid an increase in your electric power demand. This pleases the power company, inasmuch as such an arrangement protects its lines from the sudden drag of the extra load coming on at a time when a plant already is drawing a maximum load.

Section 3808, Accessibility and Grouping: Switches and circuit-breakers, so far as practicable, shall be readily accessible, and shall be grouped. This simple paragraph means a lot, and therefore is important for us to keep in mind. That is, by "readily accessible," it is meant that you should, at all times, keep a working, standing or operating area on either the floor or on a platform immediately at, or under, the switch or group of switches, as well as a passage-way or stairway to that area. It further means that switches must not be mounted so high as to be out of reach unless you have a ladder or some other quickly available means of reaching the switch close by. By "grouping" it is meant that the switches should not be scattered around or mounted haphazardly, but arranged in as compact a group as possible. However, this is a case that is subject to your local conditions.

Section 3809, Covers of Flush Snap Switches: Flush snap switches, if mounted in ungrounded metal boxes and located within reach of conducting floors or other conducting surfaces, shall be provided with covers of non-conducting, non-combustible material. Face plates, if of metal, shall be not less than 0.04 inch thickness, and plates of non-conducting, non-combustible material shall not be less than 0.10 inch in thickness.

Section 3810, Mounting of Surface Type Snap Switches: Snap switches used with open wiring on insulators shall be mounted on sub-bases of insulating material which will separate the conductors at least one-half of an inch from the surface wired over.

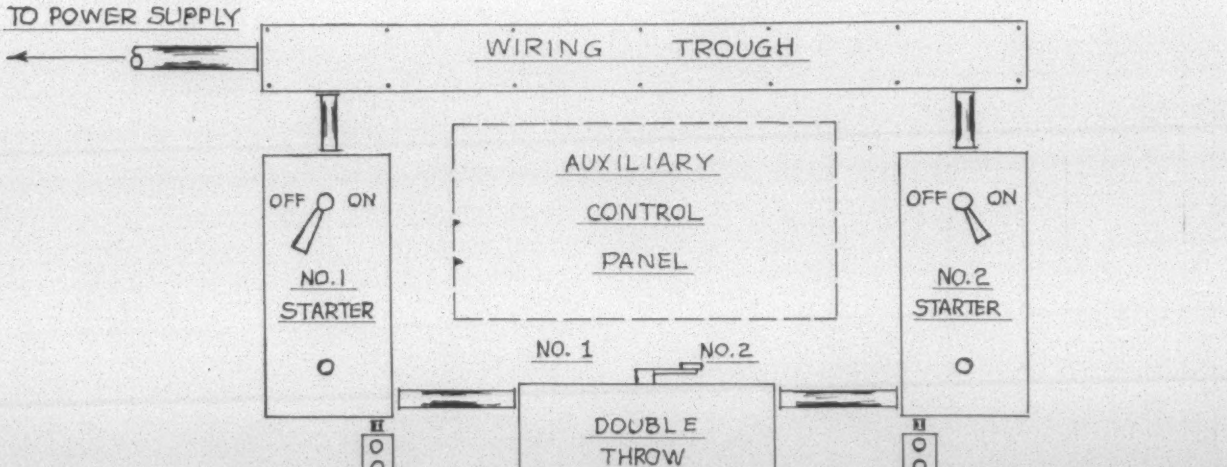
Section 3811, Circuit Breakers as Switches: A circuit breaker operable directly by applying the hand to a lever or handle may serve as a switch provided it has the number of poles required for such switch.

Section 3812, Grounding of Enclosures: Enclosures for switches or circuit breakers on circuits over 150 volts to ground shall be grounded in the manner specified in Article No. 250, except where accessible to qualified operators only.

Section 3813, Knife Switches: Knife switches of the following ratings shall be used only as "isolating switches" and shall not be opened under load:

0 to 250 Volts	More than 1,200 Amperes
251 to 600 Volts	More than 600 Amperes

To interrupt current ratings greater than the following, a



Sketch showing arrangement of control group for each of two mercerizing machines at the American Plant of American Yarn and Processing Co., Mt. Holly, N. C. Note that there are two combination motor starters, either of which can be used at the operator's discretion or as the condition of the starters dictates (that is, whether they are in suitable operating condition or not), by merely throwing the switch from one starter to the other.

circuit breaker or a switch of special design, approved for such purposes shall be used:

1,200 Amperes at 250 Volts
600 Amperes at 600 Volts

Knife switches of lower rating may be used as "general-use" switches and may be opened under load. Motor circuit switches may be of the knife-switch type. (See definition below.)

Definition of Switches

Isolating Switch: A switch intended for isolating an electric circuit from the source of power. It has no interrupting rating and is intended to be operated only after the circuit has been opened by some other means.

General-Use Switch: A switch intended for use as a switch in general distribution and branch circuit. It is rated in amperes and is capable of interrupting its rate current at its rated voltage.

Motor Circuit Switch: A switch, rated in horsepower, capable of interrupting the maximum operating overload current of a motor of the same horsepower as the switch at the rated voltage. This brings us to an interesting point. You'll remember that, in the past, there has been available a wide variety of enclosed safety switches such as you generally use in a textile mill. This has been reduced to conform to the requirements of the code, and below, we are giving a tabulation of the latest rated switches, followed by an explanation of the various types given:

Type A Fusible Full Safety Switches, 230 Volts, Three-Pole

30 amperes	3 horsepower
60 "	7½ "
100 "	15 "
200 "	30 "
400 "	50 "
600 "	Not horsepower rated
800 "	" " "
1,200 "	" " "

Type A Fusible Full Safety Switches, 575 Volts, Three-Pole

30 amperes	7½ horsepower
60 "	20 "
100 "	30 "
200 "	50 "
400 "	Not horsepower rated
600 "	" " "

Type C Fusible Safety Switches, 250 Volts, Three-Pole

30 amperes	3 horsepower
60 "	7½ "
100 "	15 "
200 "	30 "
400 "	50 "
600 "	Not horsepower rated

Type C Fusible Safety Switches, 575 Volts, Three-Pole

30 amperes	7½ horsepower
60 "	20 "
100 "	30 "
200 "	50 "

Type D Fusible General Service Switch, 250 Volts, Three-Pole

30 amperes	Not horsepower rated
60 "	" " "
100 "	" " "
200 "	" " "

The Type A fusible switches are quick-make and quick-break, and have an interlocking cover that won't, or can't, come open while the switch handle is in the "on" position. It has a heavy-duty build, and, is therefore most suitable for textile mill work in general. It will give better service under adverse conditions. Another fact of importance is that the switch cannot be closed with the door in the open position by any one meddling around the job. Of course your electrician can do this by the proper use of his screw drive, however, that is "off the record." The 800-ampere switch has 400-ampere fuses doubled, and the 1,200-ampere switch has 600-ampere fuses doubled. The Type C fusible switches have quick-make and quick-break features, but the covers are not interlocked, as in the Type A. They are rugged switches, and will also give good service in your plant. The Type D fusible switches are quick-break only, and are not quick-make, are not of heavy or rugged type construction, and are, therefore, not suitable for use in your plant. However, I know that during the war and also the recently past period, you had to take and use these because there were none others to be had.

Section 3814, Rating of Snap Switches: Snap switches shall be rated as follows:

(a) *Non-inductive Loads:* For non-inductive loads other than tungsten filament lamps, switches shall have an ampere rating of not less than the ampere rating of the load.

(b) *Tungsten Filament Loads:* For tungsten filament loads, and for combined tungsten-filament and non-inductive loads, switches shall be "T" rated, except where the three following qualifications are satisfied: (1) if switches are used in branch circuit wiring systems in private homes; in rooms of multiple-occupancy dwellings used only as living quarters by the tenants; in private hospital or hotel rooms; or in similar locations but not in public rooms or places of assembly; and (2) only when such a switch controls permanently connected fixtures or lighting outlets in one room only, or in one continuous hallway where the lighting fixtures may be located at different levels, or on porches, or in attics or in basements not used for assembly purposes; and (3) when the switch is not rated at less than ten amperes at 125 volts, or five amperes at 250 volts; or, for the four-way switches: five amperes at 125 volts, or two amperes at 250 volts.

(c) *Inductive Loads:* Switches controlling inductive loads shall have an ampere rating of twice the ampere rating of the load, unless they are of a type approved as part of an assembly, or for the purpose employed.

(NOTE: For switches on sign and outline lighting, see Sections 6002, 6003, and 6004, later; for switches controlling motors, see Section 4383, later.)

Mill Office Heated By Water From Underground

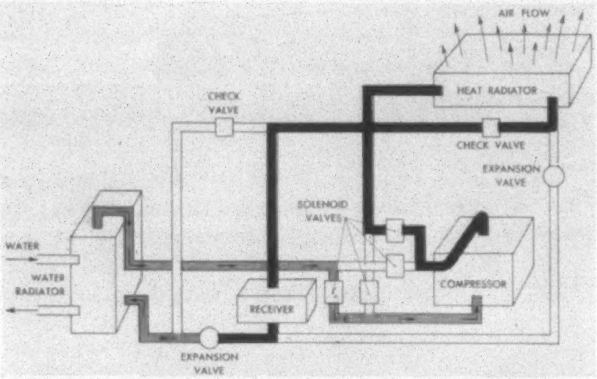
By DAVID CLARK

FOR several years there have been references in scientific magazines to the possibilities of heating buildings and homes by tapping the heat of underground water, but I had never seen that system actually in operation until a recent visit to the office of Randolph Mills, Inc., at Franklinville, N. C.

In normal winter weather Randolph uses no coal or gas or electricity, but the office is heated to a very comfortable temperature by a system which extracts the heat from underground water. Due to the fact that the drill went down only 60 feet to an old well, instead of the recommended 200 feet, Randolph does not get the temperature of water which is recommended and in cold weather the office heat is increased with stoves.

The water comes up at a temperature of between 55 and 60°. Through a system of pump and refrigerant gas compressors, the heat is extracted from the water and it goes back into the well at about 40°. The heat goes to the offices through a set of ordinary hot air ducts and ventilators.

It is said in hot weather the system can be reversed and used as a cooling and air conditioning system. As it has been installed since summer time it has not been tested along those lines. We do know that it works very well as a heating system, although not as well with water from only 60 feet under ground as it would if the pipes went down 200 feet.



Above illustration shows operating principle of the Marvair system.

The system installed at the offices of the Randolph Mills, Inc., Franklinville, N. C., is known as the Marvair System. It was installed by the Stimson Engineering Co. of Winston-Salem, N. C. The catalogue described the operation as follows:

"Marvair is a device for pumping thermal energy or heat from one temperature level to a higher temperature. It delivers large amounts of thermal energy at moderate temperatures by the expending of a smaller amount of electric energy. It is, basically, nothing more than the ordinary household refrigerator unit.

"Marvair utilizes the earth as the source of heat because in the earth there is available everywhere large quantities of heat at temperatures which permit efficient operation. In order to see how Marvair makes use of this earth heat, let us consider how a heat unit gets from the earth to the air in a room. A heat unit stored in the earth comes in contact with a cold pipe extending into the earth and is absorbed by the water in this pipe. The water, in being pumped up the pipe, carries the heat unit to the water radiator of Marvair, where the heat unit naturally goes to the cooler region and is absorbed by the refrigerant gas. This gas is carried to a compressor where the pressure of the gas is increased, and, as in all adiabatic compressors, the temperature also increases. This higher temperature and pressure gas is discharged from the compressor and moves to the air radiator over which cool air flows. Again the heat unit seeks out the cooler region. This region is the air stream on its return path to the room. The heat unit is transported in this stream to the room to be heated, thus performing its function.

"It will be noticed that in this process there are three independent circuits. The first is that of the water system used to absorb heat from the ground. The second is the refrigeration circuit which transfers heat to the air stream and to a higher temperature level. The third circuit is that of the air stream which transports the heat to or from the space to be conditioned."

We understand that Mr. Stimson, the manager of Stimson Engineering Co., heats his Winston-Salem home with this system and therefore uses no coal, gas or electricity for heating.

Materials Handling

Making A Materials Handling Survey

By A. E. AUKENS, Materials Handling Consultant, Ray Village, Ohio

— Before Conference at National Materials Handling Exposition —

THE attention of factory executives today is being turned to the problem of holding production costs down, while many of the elements of these costs are still edging upwards. Supplies of goods are beginning to meet the demands, and the sellers' market is turning into one dominated by the buyers. Efforts to hold the line on selling prices are putting a squeeze on operating profits. These factors naturally increase the importance of high production and improved efficiency in manufacturing enterprises. The search for ways and means to bring about these improvements is definitely under way.

Modern materials handling methods may not be management's last defense against rising costs, but there is certainly no doubt that they offer one of the best and quickest means of assuring profits in the months to come. When a board of directors or a factory manager decides to explore the possibilities in materials handling, someone will be singled out to conduct a survey and to bring in recommendations for their consideration. The man who receives the assignment may be an engineer already engaged in the manufacturing organization, or he may be a consultant who has specialized in this sort of work in a variety of industries. In any event, the party who will conduct the survey should plan his course of action, to assure that all the important elements are considered and that logical conclusions are drawn within the limits of the assignment.

Establishing Scope of the Survey

The first and most important step to take is to determine the extent to which management will respond to the recommended changes. Obviously, the survey will be a failure if it is based on a program of new construction, after the owners have clamped down the lid on building expansions. If the survey is predicated on moving all operations to a more suitable building that is vacant nearby, it will be of doubtful value if the company has just signed a new lease on its present quarters.

Before the survey project gets under way, management must be sounded out on its reactions to the costs of carrying out the recommendations that may be offered. This will be not only a determination of the funds that will be available, but also a statement of what portion of the expenditures may be for capital goods. It is not a function of the materials handling engineer to know or understand the reasons behind the company's financial policies, but it is certainly his duty to get statements on these matters, at least to the extent of determining the course and limits of his project.

It is well to establish early whether the survey is meant to cover only one or a few of the processes and departments, or whether it is to be plant-wide, from the receiving dock to the shipping platform, or more correctly, from the supplier's plant to the consumer's dock. The question of whether management is willing to relocate machinery and entire departments should be brought up in the early stages, as plant layout is the most direct solution to materials handling problems. An investment in equipment to serve a particular handling problem, though it may be supported by cost reduction figures, cannot be recommended if a change in plant layout will eliminate the handling problem.

Having set the limits of his project, the engineer is then in position to begin the task of observing and recording the concrete facts that will guide his judgment toward the final recommendations.

Every building has definite physical characteristics that govern its utility for manufacturing or warehousing purposes. The location of the structure, its size and its shape, the condition and strength of its floors and walls, the location, size and style of its freight docks, the location, size and capacity of its freight elevators, are all factors to be noted. Buildings with multiple floors present problems in vertical transportation and low floor loading capacities; factors that are not encountered in structures having all their space for operations at the ground level.

The load limitations on upper floors very definitely affect the detail of the materials handling system, by demanding the assignment of only the lighter production equipment to those levels, and by setting low limits on the weight of load units and conveyances. The factor of multiple levels demands that the equipment for horizontal movements be integrated with the equipment for vertical movements, or that the handling equipment be of a type that will serve in vertical as well as horizontal movements. Certainly the locations of truck docks and railroad sidings will determine the placement of the shipping and receiving departments. Such external facilities can, of course, be relocated, but generally the cost of these moves cannot be written off in a reasonable time, if at all, out of savings.

When surveys are made in plants that are already set up and operating, some additional physical limits are presented by equipment and processes that are costly to move. Cupolas, open hearth furnaces, pickling tanks, storage silos and other permanent or semi-permanent installations, are anchor points which set the pattern of the lines of materials flow. A drawing of the floor plan of the complete plant should be acquired or prepared, and the physical limits and anchor points should be marked in their true positions. This layout drawing will be useful in studies of the paths of flow and in the selection or specification of the materials handling system.

Anticipating Production

After the scope and physical limits have been established, and before a detailed study is made of materials flow, an estimate of the kind and amount of production for the next one to three years should be obtained. An estimate of this sort may be like a shot in the dark, but the survey is concerned with the future, and coming events can only be approximated. The person who is conducting the materials handling investigation is likely not in position to anticipate production, so he must obtain the figures from those people who are in more intimate contact with the consumers.

Even in jobbing production, management has a fair idea of what may be expected in the near future. Sales departments are in constant touch with users, and have reasonably accurate ideas of what the demands of the market will be A factory may have been producing a line of goods of a certain type throughout the past two years, but due to a variety of factors in the market, the management may plan to shift gradually into an entirely different line of products. Although the production machinery requirements of the new line will be about the same as for the present line, the materials handling considerations may be entirely different. Radical changes may be encountered in the kind and volume of raw materials, in the routing of materials through the processes, and in the relative volumes of materials in the various paths of flow. The surveying engineer must know of any expansion plans that are under way, of any new products and new models that will be injected, and of any new processes that will be used in place of the present methods.

A sizeable contract, being bid on by the manufacturer, may be an important consideration in the materials handling picture. A knowledge of such a contingency will allow the surveying engineer to prepare alternate recommendations, one to suit if the new work is handled, and the other to apply if the contract is not obtained.

Selecting Predominating Items

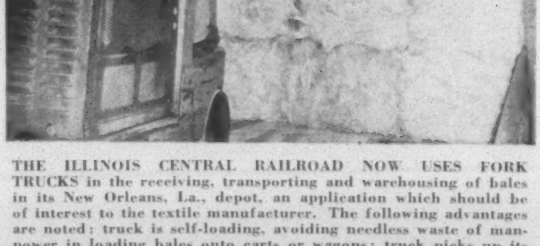
The materials handling problems in any industry are numerous in variety, and it is not reasonable to expect that any one type of handling machinery will perfectly suit all of the major demands. Also, it cannot be expected that even several types of handling machinery, integrated into an efficient system, can suit some of the minor demands while fulfilling all of the major requirements. It follows, then, that the efficient system for an average plant will comprise two or more types of equipment, integrated in application, and well suited to all of the major handling problems concerned. The fact that some of the minor handling operations must be performed with somewhat primative methods, does not detract from the value of the system.

It may be said of most any industry that about 80 per cent of the materials handling work is expended on a certain ten per cent of the items or materials concerned. This fact can be applied to simplify the study of handling requirements in a materials handling survey. The items and constituents having the greatest handling demands can be identified by examination of the finished products and through a simple analysis of the processes employed in their production.

In general, the characteristics of a material that determine its handling demand are weight, quantity, size, shape, fragility and perishability. In a secondary manner, the number of operations performed on a part will increase its handling demand beyond that which is indicated by its size, quantity or weight. Indirect materials, which do not end up as parts or constituents of the finished goods, should not be overlooked, as they may have handling demands comparable even to the most dominant of the direct materials. Sand in a foundry is a good example of an indirect material of major proportions. When the dominant items and materials are established, specific data should be obtained on each, such as its weight per cubic foot, the sources of supply, the size of lots received, the type and size of transporting containers, the degree of inspection required at receiving, etc.

Estimating Cost of Present Methods

Having singled out the parts and materials that are major, from the materials handling standpoint, the surveying engineer next estimates the cost of handling these items with the present methods and on the proposed production schedule. A flow chart is prepared for each of the selected materials, and each handling operation performed on the material is listed in sequence from receiving to the point where it is placed into a sub-assembly or into the final product. The time required to perform each listed operation is marked opposite the description, and is stated in decimals of hours. The number of units handled in the time stated, and the number of men engaged in the operation should be shown, as the figures must be extended to indicate the man-hours expended on each piece.



THE ILLINOIS CENTRAL RAILROAD NOW USES FORK TRUCKS in the receiving, transporting and warehousing of bales in its New Orleans, La., depot, an application which should be of interest to the textile manufacturer. The following advantages are noted: truck is self-loading, avoiding needless waste of manpower in loading bales onto carts or wagons; truck picks up its load inside the box car, eliminating extra handling in getting bales outside the car; truck can lift bales overhead for tiering, thus making available additional head room which could not be utilized economically if bales were stacked by hand; no pallets or skids are required, since forks of the truck can slip beneath bales without damaging them; demurrage is decreased due to speedier car loading and unloading.—*Photo from Yale & Towne Mfg. Co.*

Synthetic standards may be set up, in the absence of real time study data, for the time consumed in each handling and moving element. If the synthetic standards are reasonably good estimates and are applied equally to all cases, the resulting cost figures will be quite reliable.

Processing operations, and the time consumed in performing them, are excluded from the flow chart, as they are not factors in the cost of handling. Usually, the element of handling that is included in the standard time for a processing operation can be omitted also. This presumes that the processing operator will not be convenienced or inconvenienced by a change in methods of materials handling between operations. However, in cases where alternate methods will change the standard time for a productive operation, a separate study may be made to evaluate the difference.

The next move is to apply the proposed production figures, on a monthly basis, to the handling time estimated for each piece. This gives the total man-hours expended each month on each of the materials considered. Man-hour totals can be converted to cost in dollars by applying a suitable wage rate and burden.

With the completed flow charts, and the other data collected earlier in the survey, the engineer has a concise picture of his project, and in a form suitable for the application of the principles of efficiency in materials handling. Examination of these data will show where the greatest man-hour or dollar savings can be effected, and where changes in layout will eliminate some of the handling and moving elements. They will suggest the utilities that should be provided by the handling equipment, and will provide a basis for comparison of alternate methods from the standpoint of cost savings.

In addition to these indications, the facts and figures will provide data for estimating the areas needed for stores, of space required for banks ahead of certain operations, and of the numbers of containers and conveyances required for storage and movement of goods. The application of each principle of efficiency in materials handling can be evaluated by cost and volume summations. The various modes of handling and conveying can be evaluated in terms of costs. Savings can be estimated for any method to determine if the cost of purchase, installations and operation of new equipment will be amortized in a reasonable time.

Prescribing the Materials Handling System

After studying the cost figures in applying the principles of efficiency, the surveying engineer can detail the materials handling system best suited to the findings. The system should be tailored to the handling requirements of the proposed production, to the physical features of the plant and to the investment limits prescribed by the owners. If the recommended system comprises two or more different modes of handling, the interlocking of the different methods should be detailed to assure integration of their operations. Standardized containers, pallets and work carriers facilitate the interlocking of separate systems. The provision of space and equipment at load transfer points makes for efficiency in the co-ordination.

The details of the recommended system should include the required number of each type of conveying unit, the quantity, size and style of containers and carriers, and the enumeration of the auxiliary facilities that will develop the full efficiency of the handling equipment. If the project includes the relocation of machines and departments, a drawing of the revised layout should be included as a part of the survey. Layout drawings should be prepared also in cases where new buildings are incorporated in the plans.

In the course of his studies into the materials handling elements of the manufacturing enterprise, the surveying engineer will find numerous cases where the solution of problems is dependent not upon equipment alone, but also on the effective control of production and materials. He will realize then, if he never did before, that mechanical equipment which will take the place of production planning and materials control has not yet been developed. The engineer's recommendations for layout and machinery will be based on some degree of production management. His proposal cannot be considered complete unless it includes suggestions to management on such planning functions.

Reporting on the Survey

A considerable amount of figures and facts are accumulated in the course of investigations in a materials handling survey. These form the basis for the planning that leads up to the formulation of the recommendations. Although the recommendations are the results, and therefore the purpose of the survey, they alone do not constitute a complete record of the work, nor do they comprise a satisfactory statement to management.

The parties who will authorize the program of alterations and equipment installations will need to know the amount of the expenditures involved, the estimated savings that will result and an approximation of the time required to amortize the investments. Presentation of the observed facts and the reasoning applied in the formulation of recommendations, is quite necessary to the "selling" of the program.

The most satisfactory means of recording the work and presenting the plans is with the formal report. The extent of the survey will determine the number of reports that should be prepared, as separate papers are desirable for each of the distinct phases of the project. A summary report may be prepared at the end of the survey, to give the overall picture and to outline the interlocking of the several phases.

It is well to include prints of equipment and layout drawings, if any were prepared, and any formal proposals or estimates that may have been received from vendors or contractors. Exhibits of this nature may be bound with the reports to which they pertain, or all included together in a folder or file submitted with the summary report. All work sheets accumulated during the survey should be classified and filed for future reference, along with a set of copies of reports. This will complete the procedure for the materials handling survey.

A survey that is well planned and executed can be completed at a cost of around five per cent of the expenditure for installing the whole program. Even in cases where the survey recommendations are not acted upon, it is probable that one or more of the findings can bring about savings in excess of the survey costs.

Materials Handling Exposition Is Held

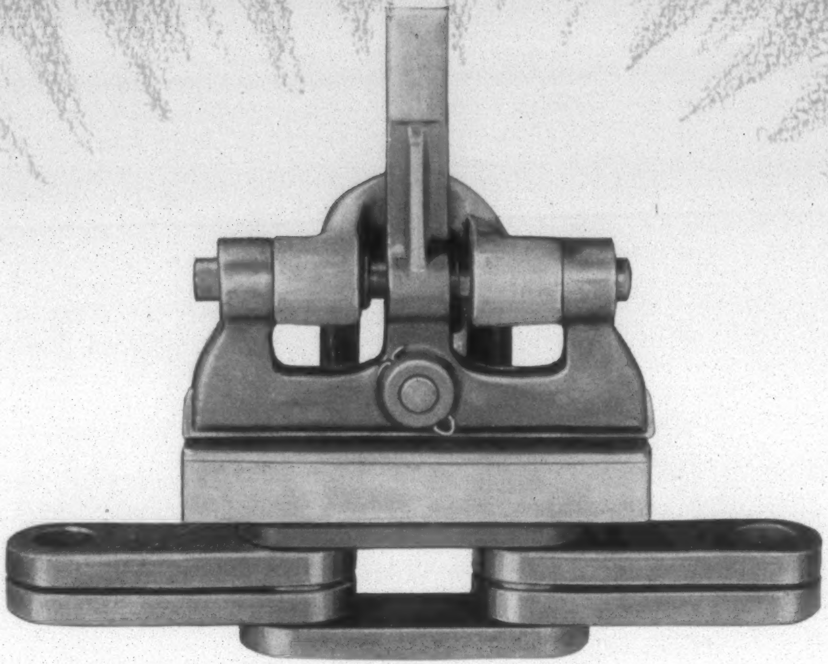
The National Materials Handling Exposition was conducted for the second year in the Public Auditorium, Cleveland, O., Jan. 12-16. Edwin J. Heimer, president of Barrett-Cravens Co., Chicago, was chairman of the exposition committee. Approximately 200 exhibitors, 60 per cent more than the number represented at the first show, contracted for booth space. The exposition, which attracted more than 12,000 top management executives in its initial effort, occupied almost 200,000 square feet of exhibit space, nearly three times the previous area, and thus ranks among the top 15 national industrial expositions. All systems of materials handling were on exhibition to make the showing completely representative.

Educational features included a Conference on Materials Handling, held concurrently with the exposition; a Materials Handling Theater, which presented films on handling subjects, and an institutional presentation of materials handling equipment and systems in addition to those shown in the commercial exhibits. Virtually all booths were larger in area to permit demonstration of equipment in motion. Increases ranged from two to five times previous areas used. To accommodate the larger booth dimensions, the exposition was moved to the Lakeside exposition halls of the auditorium.

More than a score of experts in the materials handling field, chosen from many industries, were speakers at the Conference on Materials Handling. The conference, which is the only major forum for materials handling problems through the year, lasted four days, Jan. 12-15, inclusive. One of the major features of the conference was a demonstration of all types of materials handling equipment. The demonstration was conducted by the management and materials handling sections of the American Society of Mechanical Engineers, which called a special national meeting for the purpose. Equipment was rolled on to a platform, shown in its various uses, and a running commentary explained the machines' functions.

Clapp & Poliak, Inc., 350 Fifth Avenue, New York 1, N. Y., managed the exposition. Serving with Mr. Heimer on the exposition committee were Lloyd Backart, president, Rapids-Standard Co., Inc., Grand Rapids, Mich.; Ezra W. Clark, materials handling consultant, Battle Creek, Mich.; Irving B. Hexter, publisher *Flow* magazine, Cleveland, and R. L. Wolter, sales manager, Automatic Transportation Co., Chicago. Mr. Hexter was chairman of the program committee for the conference and Mr. Clark vice-chairman. The motion picture committee was composed of Gordon J. Berry, vice-president, Electric Products Co., Cleveland, chairman; R. G. Redhead, same company, vice-chairman, and L. P. Aurbach, vice-president of *Flow*. E. I. Burke, manager of shipping, Republic Steel Corp., Cleveland, was chairman of the banquet committee, and Elmer F. Twyman, general manager, Automatic Transportation Co., vice-chairman. The publicity committee was composed of Mr. Wolter, as chairman; Milton M. Enzer, assistant to the president, Yale & Towne Mfg. Co., New York; Paul O. Ridings, president, Ridings-Ferris, Inc., Chicago, and Ed Greif, Banner & Greif, New York.

THE GOLDEN AGE FOR TENTERS



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Naphtol Dyeing, Past And Present

By FRANCIS TRIPP, B.S., M.S., Ch.E., Head of Chemistry Department, New Bedford (Mass.) Textile Institute

THE first patent on a method of dyeing cotton piece goods with naphtol colors was issued to Robert and Thomas Holliday, of Huddersfield, England, about 1881. They obtained a patent on dyeing the historic Para Red. This was obtained by impregnating cotton fabric with an alkaline solution of beta-naphtol, then drying the fabric and passing it through a developing bath of diazotized paranitroaniline base. This gave a beautiful bright red shade, but the color was not very fast to washing and faded very rapidly in the light. However, this was the famed Para Red that is always mentioned when dyers of naphtols reminisce.

More than 30 years elapsed after the discovery of Para Red before Naphtol AS was produced by the Greisheim Co. in 1912. Naphtol AS is the anilid of beta-oxy-naphthoic acid. The invention of Naphtol AS aroused new interest in the dyeing of naphtols, because the dyeings using Naphtol AS were fast to washing, and also mild bleaching. However, World War I came shortly after this discovery, and it was nearly ten years before Naphtol AS in combination with Fast Red G Base was used in many dye houses to produce the pleasing bright red shade that we see today in cotton sports jackets, children's dresses, skiers' wind breakers, slip covers, etc. Only this combination of Naphtol AS and Red G Base will produce the brilliant red. Vat dyestuffs cannot approach this shade of red, they are much duller.

With the advent of Naphtol AS, it was not long before other naphtols were produced. First was Naphtol ASBO, which gives beautiful Bordeau and wine shades. Then Naphtol ASRL, which made it possible to dye shades so superior in light fastness that it was used for dyeing cotton goods that were to be made into awnings and draperies. In 1921 when Naphtol ASG, ASBG, and ASBR were made, it became possible to dye yellow and also brown shades of good fastness to light and washing.

There are three steps in the dyeing of naphtol colors: (1) the impregnation of the fabric to be dyed with the suitable solution of the naphtol (called naphtolating); (2) drying of the naphtolated cloth; (3) coupling the dried naphtolated cloth by passing it through a solution of a diazotized base or salt. At the instant the naphtolated cloth passes into the solution of the diazotized base or salt the dyestuff is formed on the fiber and the color appears immediately. In some cases the drying is omitted.

Fast Color Salts and Bases

As stated above, the naphtolated material has to be passed through a solution of base or salt in order to produce the color on the fabric. Originally only bases were known and, before they could be used, it was required that they be dissolved and treated with sodium nitrite, hydrochloric acid, ice to keep the solution cold, and finally with sodium acetate, which neutralizes any acid left in the solution. This process is called diazotizing of the base and only skilled workmen can conduct this process. (*Note*—naphtols are often called *ice colors* due to this process.) Later the dyestuff companies brought out the fast color salts which are ready diazotized bases in powder form. These fast color salts do away with the tedious process of diazotizing the base. One merely has to dissolve the fast salt in water and pass the naphtolated material through it. These dry diazo salts are stable for years. From a real practical standpoint a dyer, if he is expert at diazotizing, can save money by using bases. The use of the base is much cheaper than using the fast color salts. However, if the base is not properly diazotized, then the dyer has inferior dyed goods. From a survey taken, it is figured that the dyers are in slight favor of the salts, as they are practically foolproof.

Non-Substantive and Substantive Naphtols

When a dyestuff has an attraction for a fiber or fabric and attaches itself, then it is said to be substantive. Some naphtols are substantive to a high degree and others to a lesser degree. The substantivity of a naphtol has a bearing on how it shall be applied and also on the final fastness of the dyed fabric. The Para Red dyeing referred to at the start of this article was naphtolated with Beta Naphtol, which possesses but very little substantivity on cotton. It is therefore only surface coated and makes drying necessary before coupling. Due to the fact that Beta Naphtol was not substantive, the resultant Para Red produced was not fast to washing and crocking.

The non-substantive naphtols are applied to the fabric by padding through a two or three-roll mangle, drying and then passing through a solution of the diazotized color base or fast color salt (coupling). This coupling can be done on the conventional three-roll mangle which gives two dips and nips. If slow coupling bases or salts are used, such as violet, blue and browns, then the coupling should take place on the jig.

The naphtols suitable for padding are AS, AS-NB, AS-MX, AS-OL, AS-PH, AS-KR, AS-RL, AS-LT, AS-BS, AS-BG, AS-BO, AS-L4G, AS-G, AS-E. Naphtols of high substantivity, which have such affinity for the fabric that they exhaust from the solution, are best applied on the jig. These naphtols exhaust at the rate of 20 per cent for the AS-TR to 98 per cent in the case of AS-S. The members of the high substantive group are valuable where a high degree of fastness is required and where drying of the fabric before coupling cannot be carried out. After impregnation of the fabric with the naphtol, the fabric is given several rinses with alkaline salt solution to remove surface naphtol before it is coupled. In the case of large yardages or of mixtures of different substantivity, where the padding process might be preferred over the jig method, the mangles that are used for padding should have very small pad boxes.

Substantive naphtols are AS-TR, AS-ITR, AS-SW, AS-LG, AS-BR, AS-LC, AS-L3G, AS-LB, AS-DB, AS-GR, AS-SR, AS-SG, AS-S. Naphtols should be applied to the fabric at a 120° F. but seldom at higher temperatures. There are exceptions like AS-BR, which produces heaviest shades when applied at 120° F. to 140° F. AS-L4G should always be applied above 120° F.

Developing, or coupling, is carried out cold. In coupling, sufficient time must be allowed for the base or salt to react with the naphtolated material, and the bath should retain a slight acid condition. Acetic acid can be added from time to time to keep the bath acid. Most of the Blue salts and bases couple best in neutral solution. Nearly all of the coupling agents are suitable for pad developing and can be used for continuous work. Fast Brown V Base, Blue BD, RT, and FGN salts can be coupled by pad method only. The red salts and bases are very fast in coupling, but the blues, violet, corinth and browns are slow in coupling. In the set-up for continuous dyeing, proper time must be allowed for the coupling to take place according to which base or salt is being employed. This is accomplished by "skying" the goods.

During developing or coupling, it is very important to add Diazopon A to the bath (one pound to 50 gallons) as it keeps the excess of color lake formed in a fine dispersion which allows the subsequent washing operation to rinse it off the fabric. In order to keep the naphtol from coming off the fabric during the coupling or developing, it is essential to add salt to the developing bath, at the rate of three or four pounds per ten gallons of developing bath. If the goods have been dried after the naphtolating, it is not necessary to add salt to the developing bath. No salt should be added to solution of Fast Brown V Base, Fast Black Salt K, Fast Black LB Base, Fast Red Salt AL.

Crocking

As is well known, the one real fault of naphtol colored fabric not properly dyed or after treated is its tendency to crock when other material is rubbed against it. It is merely excess or surface color lake that causes the stain, but one can imagine the trouble that is created when someone wearing white clothes on a summer day sits in an automobile whose slip covers are dyed Naphtol Red or Blue and has the loose surface color lake transferred to his or her clothes. The writer has seen naphtol dyed cotton dresses trimmed with white collars which crocked badly on the first washing, so that the white collars were actually colored by the loose color lake. However, on repeating the washing, using lots of soap and a small amount of agitation, the dresses laundered perfectly. Needless to say, in all successive washings, the dyed part of the dresses did not transfer any color lake to the white collars. In this particular case, the trouble caused by the fact that whoever dyed the fabric of the dresses did not after-treat enough to remove excess color lake. Obviously it took more soaping to make the fabric alright. If goods are going into draperies, their crocking is not a main issue. Likewise, fabric for awnings or garden umbrellas do not present a crocking problem. The writer also has had the opportunity to test innumerable samples of naphtol dyed fabric that potential buyers wanted approved as suitable for slip covers. Using the A. A. T. C. C. crock meter test, 90 per cent were passable, which indicates that most dyers know and respect the value of a good aftertreatment.

A good aftertreatment means a good soaping with all of the agitation possible. In the continuous dyeing and soaping, the fabric is passed in open width through a series of wash boxes with a hot spray and squeeze as the goods leave each successive compartment. Practical mill men have found a solution of soda ash, soap and synthetic detergent very effective in removing excess color lake. The following method gives good results in removing excess color. After completion of the coupling of the dyestuff on the jig, assuming the jig holds 60 gallons of water, give the goods the following treatment:

2 ends—running cold water with overflow.
2 ends—running hot water 180° F.
4 ends—hot water 200° F. with
  2 lbs. soap
  2 lbs. detergent such as Igepal CTA, Atcosyn or Hymolon CRD.
2 ends—hot water at 200° F. and shell goods up through cold water.

Practical Dyeing Formulas

I. Jig Dyeing
Fabric: cotton duck
Shade: maroon

The cotton duck having been scoured on the jig, dried, and ready for the naphtolating.

A. Preparation of the Naphtol: 50 gallons.

Paste 13 pounds of Naphtol ASMX in alcohol or cellosolve (cold) and then add 1½ pounds of flake caustic soda previously dissolved in one gallon of water. After the caustic has been added, the solution should be clear and sort of a canary yellow in color. If it is not clear, then a slight heating will make it clear. This solution is then added with stirring to the 46 gallons of water in which is dissolved 3½ pounds of flake caustic soda and three pounds of common salt. The solution is heated to 180° F. The cotton duck is then padded through this solution, batched and then dried over drying cylinders or by the Andrews and Goodrich "blast" air dryer. The dried naphtolated duck is then passed through a bath of diazotized base made up as follows:

B. Preparation of the Base: 50 gal. mixing.

Paste 10.1 pounds of Fast Garnet GBC Base with water, and then add a solution of 19 pounds of hydrochloric acid (technical 30° TW), ice, and water to cool to 40° F. It should not be above 20 gallons. Then add very slowly with stirring 2½ pounds of sodium nitrite previously dissolved in water. Let bath stand with occasional stirring for about 20 minutes. Test bath with Congo Red paper. If paper does not turn blue, add hydrochloric acid until it turns blue, then test bath with potassium starch iodide paper. If the potassium iodide paper does not turn blue

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add more sodium nitrite until it turns blue. Just before use add sodium acetate and test with Congo Red paper until faintly acid (paper will turn faint blue). Then add acetic acid until the bath tests a pH of 5. Add this diazotized base to 35 gallons of cold water, in which has been dissolved five pounds of Igepal CA Extra and eight pounds of Diazopon A. Pad the duck through this solution cold at 40° F. and batch. The dyed duck is then after-treated with soap, soda ash, and detergent as previously discussed.

In general the usual temperature recommended for soaping is about 160° F., but in practice soaping temperatures may run from about 140° F. to 200° F. The cast or shade of the final color is influenced greatly by the temperature of the soap bath. Higher temperatures yield brighter and perhaps somewhat lighter shades, while at the lower temperatures greater depth of color is obtained at a sacrifice of brightness.

Process Gives Cotton High Rot Resistance

The best means yet discovered for protecting cotton fabric and yarn from mildew and other forms of rot is to convert part of the fiber chemically to cellulose acetate, similar to acetate rayon, the Southern Regional Research Laboratory of the U. S. Department of Agriculture reports. Tests there indicate that no other rotproofing treatment gives as much resistance against the various rotting organisms which cause serious losses each year of products made with cotton which are subject to dampness and water. Moreover, this treatment causes no discoloration, imparts no odor and does not make cotton sticky or poisonous as some other rotproofing treatments do.

Practical and rapid methods for partially acetylating fabric and yarn have been developed at the laboratory and many practical uses are foreseen for it. The process does not change cotton fabric in appearance, feel or strength, but greatly improves its resistance to rot and also improves its heat resistance. The treated fabric absorbs much less moisture and therefore swells less when wet than untreated fabric. It is dyed as acetate rayon is dyed, yet it is easier to clean because it is not damaged by cleaning fluids which dissolve acetate rayon.

The partial acetylation processes developed at the laboratory already are finding commercial use. Cotton bags treated this way are now being manufactured for water-softening systems, where they hold softeners in tanks of circulating water. Untreated bags rot and go to pieces in a month or less, but those from partially acetylated cloth remain in good condition for more than a year. Fish nets and shoe lining cloth of partially acetylated cotton are now being tested commercially. Other promising uses are: tents, awnings, tarpaulins, seed-bed covers and other outdoor fabrics; bags for fruits and vegetables; thread for shoes and other leather or for outdoor fabrics; fabric for control of floods and soil erosion; belting, hose and mechanical fabrics; insulation for outdoor electric wires. Because the treated fabric has good heat resistance as well as rot resistance, it is a possibility for use in laminated insulation for buildings.

For most economical use of the process, the degree of acetylation should be guided by the use to be made of the fabric or yarn, the chemists find. Acetylation of only 19 per cent of the cotton gives moderate rot-resistance which may be sufficient for many purposes. Even this low degree of acetylation gives fabric better mildew-resistance than other mildew-proofing treatments. Acetylation up to 30 per cent makes it extremely resistant to all forms of rot. A quick dye method for determining the strength of the treatment has been developed at the laboratory. Untreated cotton takes a blue dye and treated cotton a yellow dye. Thus, the progress of acetylation can be seen easily by using both dyes, making it possible to stop the treatment at just the right stage. Acetylating cloth is more difficult than acetylating yarn, and the heavier and more tightly woven the cloth, the more difficult it is to get uniform treatment. The chemists advise that this difficulty may be overcome by weaving heavy materials of acetylated yarn.

Slight Decline In Finishing Activity

A total of 1,935,000,000 yards of cotton, rayon and other synthetic fabrics were bleached, dyed or printed and finished during the third quarter of 1947, the Bureau of the Census announced Jan. 21. This total was 11 per cent less than the amount finished in the second quarter of 1947, but was only three per cent below the corresponding period of 1946. The decrease from the second quarter 1947 can be attributed chiefly to the customary vacations falling within the July-September period, it was said.

Cotton goods bleached, dyed, or printed and finished totaled 1,531,000,000 yards, which was 13 per cent less than in the previous quarter, and four per cent less than in the third quarter 1946. Rayon goods bleached, dyed, or printed and finished totaling 404,000,000 yards was five per cent below the second quarter 1947, but was five per cent higher than in the third quarter 1946. Total cotton goods bleached and finished amounting to 798,000,000 yards was 13 per cent below the previous quarter, but was four per cent above the third quarter a year ago.

The amount of flannels and other napped fabrics bleached and finished has risen steadily since the second quarter of 1946. The 82,000,000 yards of print cloths, plain and fancy, bleached and finished was ten per cent below the second quarter, but was 14 per cent above the third quarter a year ago. The total rayon goods bleached and finished amounted to 46,000,000 yards, which was four per cent below the previous quarter, but nine per cent above the third quarter a year ago. The 13,000,000 yards of "all other white finished fabrics of synthetic fiber, synthetic fiber mixtures, or of silk" was 38 per cent above the third quarter 1946.

The 673,000,000 yards of cotton goods plain dyed and finished during the third quarter 1947 was eight per cent less than in the previous quarter and six per cent below the third quarter a year ago. The 21,000,000 yards of combed and carded broadcloth dyed and finished continued the upward trend which began in the third quarter of 1946 and was 77 per cent above that July-September, 1946, period. The 86,000,000 yards of drills, twills, and jeans was 16 per cent below the second quarter 1947 and 41 per cent below the third quarter 1946.

Recommend Resin Treatment Of Wool Fiber

Two speakers told a luncheon meeting of the collateral group of the National Association of Wool Manufacturers in New York City last month that one of the industry's most promising methods for overcoming the problem of developing non-shrinking woolens lies in proper resin treat-

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ment of the wool fiber. Dr. Milton Harris of Milton Harris Associates outlined three kinds of instability, or shrinking: felting, relaxation and consolidation. Resin treatment and chlorination were seen as able to eliminate the "migration tendency" of wool fiber. The latter, by "equalizing the friction coefficient," has avoided the felting tendency, he said, without destroying the "long-range elasticity" of wool which is one of its valuable traits.

The second speaker, Dr. D. H. Powers, director of the textile chemicals department, Monsanto Chemical Co., agreed with Dr. Harris that home laundry machines "are tougher than commercial cleaning facilities on wool fabrics" and pose a problem for both the chemical and the wool industry. Proper penetrating of resins into the fiber, Dr. Powers said, can make wool fabrics virtually non-shrinkable, or about one to two per cent. "We can build stability for a given position of the fabric after felting and napping," he stated, adding that there is more work to be done. Chlorination treatment must precede the resin injection, however, he added.

Bonnar Heads Two A. A. T. C. C. Committees

J. Robert Bonnar, technical director of General Dyestuff Corp., was elected chairman of the research committee of the American Association of Textile Chemists and Colorists at a recent meeting of the council of the association. In addition, he also was re-elected chairman of the executive committee on research. Elected to serve with Mr. Bonnar on the executive committee were Dr. Miles A. Dahlen, organic chemical department, E. I. du Pont de Nemours & Co., Inc., and Prof. Percival Theel, head of the department of chemistry and dyeing, Philadelphia Textile Institute.

The winter meeting of the Piedmont Section of the American Association of Textile Chemists and Colorists was held at the Poinsett Hotel, Greenville, S. C., Feb. 7, with approximately 200 members in attendance.

The meeting consisted of a technical session in the afternoon and a banquet in the evening. The technical discussions were led by Herbert Scull of the A. M. Tenney Associates, New York City, and Herman J. Jordan, Jr., of Wiscassett Mills, Albemarle, N. C. The banquet speaker was T. E. Christenberry, clerk of Common Pleas and General Summons for Greenville County.

Mr. Scull's subject was "Current Dyeing Problems on Acetate—Viscose Blends and Suggestions on Meeting Them." The speaker gave an interesting report on general processing problems confronting rayon dyeing and finishing plants and pointed out the value of highly trained technical staffs in processing the many complex blends of fibers now used in various constructions, consisting of acetate, viscose, wool and nylon. The importance of careful study and selection of direct fast-to-light dyes, as well as acetate and wool colors suitable for resin treatment, was emphasized. Mr. Scull also urged careful study of inhibitors and the proper methods of applying them on the various blends.

The processing of blends requires precise controls in desizing, application of inhibitors and in the application of resins, the speaker declared. It was pointed out that an entirely new dyeing technique should be developed in processing blended fabrics through the use of the Williams machine and other recent developments. Blended fabrics are now being processed by the rapid saponifying and vat dyeing operations, but only with limited success, Mr. Scull said.

In leading the discussion on "Package Dyeing of Yarns," Mr. Jordan reviewed the problems that must be met and overcome and stressed the necessity of proper selection of dyes for levelness, solubility, and fastness values. The speaker urged a careful study of controls, flow rates, pressure and design of dyeing equipment in order to obtain consistent results on dyed packages. Proper preparation of the dyestuff by the use of modern mixing equipment and demineralized water, is important, Mr. Jordan said.

Taylor Mobley of General Dyestuff Corp. was general chairman of the meeting and arranged the program. John B. Neely of Burlington Mills Corp. is chairman, Robert H. Smith of Melrose Hosiery Mills is secretary, and Edwin A. Briggs of Southern Franklin Process Co. is treasurer of the Piedmont Section.

Dr. H. W. Stigler, director of research for the American Association of Textile Chemists and Colorists, will address the Southeastern Section of the organization at a meeting to be held March 13 at the Highland Country Club in LaGrange, Ga. His subject will be "The National A. A. T. C. C. Research Program."

Soap & Glycerine Group Elects Wrisley

Approximately 400 members were in attendance when the Association of American Soap & Glycerine Producers, Inc., held its 21st annual meeting Jan. 29 in New York City. George A. Wrisley, head of Allen B. Wrisley Co., Chicago, was re-elected president of the association to fill a second term. E. Matthew Finehout of the Los Angeles (Cal.) Soap Co., was chosen vice-president for the far West to succeed Theodore E. Allen, Par Soap Co., Oakland, Cal. Edward H. Little of Colgate-Palmolive-Peet Co. was re-elected Eastern vice-president, and Eugene A. Moss of Swift & Co. vice-president for the Midwest. Nils S. Dahl, John T. Stanley Co., remains treasurer and Henry F. Elberfeld of Colgate's, assistant treasurer.

Paul V. McNutt, former U. S. ambassador to the Philippines, was a guest speaker at the event. Mr. McNutt urged greater attention to the Far East in all respects as containing enormous undeveloped resources both physical and human, and probably containing the future of the world. He urged economic statesmanship upon his listeners in their contacts with the Philippines and other Eastern countries.

The meeting was divided into various group sessions and panels, each presided over by an authoritative member of the industry. Listed among the outstanding speakers heard during the event were George Fulton of the National Institute of Cleaning & Dyeing; George H. Johnson, general manager of the American Institute of Laundering; Kenneth T. King, manager of the fine chemicals division, organic chemicals department, E. I. du Pont de Nemours & Co., Inc.; N. N. Dalton, technical consultant of the association; and Dr. Anthony M. Schwartz of Harris Research Laboratories.

G. D. Harrison Is Elected By Finishers

G. D. Harrison of the Lewiston (Me.) Division of Pepperell Mfg. Co. was elected president of the National Association of Finishers of Textile Fabrics at the 34th annual meeting of the group Jan. 20 in New York City. Mr. Har-

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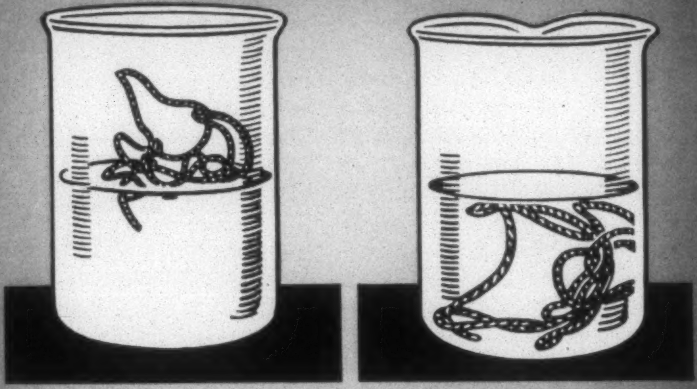

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rison succeeds William Berry of Riegel Textile Corp., who becomes chairman of the executive committee. Vice-presidents named are Arthur G. Poor of Standard Bleachery & Printing Co., and S. M. Cone, Jr., of Cone Finishing Co., formerly a member of the executive committee. Miss Alice C. Moore remains association secretary and treasurer.

Mr. Berry, in his final report as president, discussed the broad activities of the association and urged companies to explain to their employees and others the real meaning and effect of the labor-management relations act. He expressed the opinion that the advance in finishing charges has lagged far behind the advance in costs. Only volume has made prevailing charges possible, he noted. Considering the future of the industry, Mr. Berry said, in part: "I think those of us who believe in and are engaged in private enterprise have a duty to see that this system is preserved and continues to operate to the advantage of all. To do this we must be realistic and operate in such a way that standards are maintained and our businesses—and thereby our country—profit from our operations. I mean by that a continuous, reasonable margin of profit and not fluctuations of profit and loss periods. To maintain an even balance through the various exigencies to which we are and will be subjected undoubtedly presents a challenge. From our past record I feel confident we can and will meet this challenge capably. To do this we must be alert and—to use expressive slang—know what it is all about."

Miss Moore also gave a report during the meeting, outlining the work of the association and reviewing the accomplishments of the industry during 1947. The business of cotton textile finishers in yardage for the full year of 1947 showed a decline of less than one per cent from the previous year, she noted.

VELON FILM, produced by Firestone Plastics Co., now is being printed and fabricated by converters. Displayed above are representative designs.

Members of the executive committee chosen to serve for three-year terms expiring in January, 1951, were: J. K. Milliken, Mount Hope Finishing Co., North Dighton, Mass.; Clifford B. Hayes, Pacific Mills, Lyman, S. C.; A. L. Garfinkel, Lowell Bleachery, Inc., St. Louis, Mo. Elected to the executive committee for terms expiring in 1950 were: A. G. Odell of Kerr Bleaching and Finishing Works, Concord, N. C.; Benjamin I. Ward of Bellman Brook Bleachery, Fairview, N. J.; and Walter R. Howell, Bradford Dyeing Associates, Westerly, R. I., who was nominated to fill the unexpired term of George Summersby of the same company, who resigned.

Elected to serve for a one-year term, expiring January, 1949, were: William Berry, Riegel Textile Corp., New York; W. A. Broadfoot, The Aspinook Corp., Jewett City, Conn.; Harry M. Burke, Dutchess Bleachery, Inc., Wappingers Falls, N. Y.; J. Marshall Cole, Cold Spring Bleachery, Wardley, Pa.; J. B. Farrell, Defiance Bleachery, Barrowsville, Mass.; W. O. Forssell, Slaterville (R. I.) Finishing Co.; Archie O. Joslin, Rock Hill (S. C.) Printing & Finishing Co.; Lawrence Marx, Jr., Clearwater (S. C.) Finishing Co.; William F. Robertson, Jr., North Carolina Finishing Co., Salisbury, N. C.; W. H. Robertson, Robertson Bleachery & Dye Works, New Milford, Conn.; John A. Simmons, Lanett Bleachery & Dye Works, West Point, Ga.; Richard Ward, Providence (R. I.) Dyeing, Bleaching & Calendering Co. In addition to the above, the following members of the executive committee continue to serve unexpired terms, as follows: Term expiring January, 1949: W. Ralph MacIntyre, Joseph Bancroft & Sons Co., Wilmington, Del.; George E. Sinkinson, Sayles Finishing Plants, Inc., Saylesville, R. I.; Grant A. McClatchie, United States Finishing Co., Norwich, Conn.

A resolution of tribute to the late Richard W. Arrington of Union Bleachery, Greenville, S. C., ex-president whose term as chairman of the executive committee expired Jan. 20, was passed at the meeting.

Optical Bleaching Agents Theme Of Report

The development and the use of optical bleaching agents by the Germans are described in a report now on sale by the Office of Technical Services, Department of Commerce. Methods of manufacture and testing of the chemicals developed, known as Blankophor B, —R, —WT and —RG, are discussed. Optical bleaching agents are fluorescent materials which increase whiteness of textiles and other articles by converting some of the ultra-violet of sunlight into visible light. The agents used must be colorless or almost so as seen by reflection of ordinary visible light and the additional light supplied by fluorescence must be blue in order to enhance whiteness and neutralize the brownish discoloration common in fabrics and many other materials.

The general history of the development of the four Blankophors is given and Ultrasan, the forerunner of the Blankophors, is discussed. Ultrasan is described in U. S. Patent 2,171,427, issued Aug. 29, 1939, to Eggert and Wendt and assigned to I. G. Farben, as one of the numerous examples of 1, 3, 5-triazine derivatives which are said to absorb ultraviolet light. Further research by I. G. Farben revealed that "Ultrasan was an effective whitening agent for paper, that it had a strong affinity for natural and regenerated cellulosic fibers, and that it showed considerable promise for use as an optical bleach for textiles." Different laboratories co-operated in the further evaluation of Ultrasan as an optical bleach, and the name of the product was changed to Blankophor B Concentrate. After dilution with 90 per cent urea, the concentrate was called Blankophor B.

Blankophor R was developed because fabrics treated with Blankophor B were considered to be a trifle too blue and, if used in hard water, sometimes showed a slight yellow discoloration after aging. The fluorescent color of Blankophor R was on the purple side of blue and sometimes gave the treated fabric a reddish tinge. Both the B and R Blankophors are substantive to natural and regenerated cellulose fibers but have little affinity for wool and silk, the report states. Blankophor WT was developed, therefore, for animal fibers. The latter agent is the condensation product of urea and benzoin sulfonated to soluble form. It possesses the desired optical properties, is substantive to wool and silk but has little affinity for cellulose. Blankophor RG Concentrate was developed as a substitute for Blankophors B and R. Production of Blankophor B was interrupted during 1942 because of the shortage of materials, and Blankophor R had not proved a good substitute because of the reddish tint it gave fabrics. The solution to the problem was found by blending 97½ per cent of Blankophor R Concentrate with 2½ per cent of Anthralan Green G. G. The green dye served to neutralize the excess of red and to give the product a certain effectiveness even in artificial light. The mixture was called Blankophor RG Concentrate and put on the market in April 1943. The methods of manufacture of the Blankophors are described in the report, and their use as textile finishing agents and laundering bleaches is discussed.

The Blankophors leave much to be desired as optical bleaching agents, according to the report, but they were favorably received and appear to have been the first of such materials applied with real success to textiles. Their fastness to washing was fairly satisfactory but they did not show satisfactory stability when exposed directly to sunlight. Mimeographed copies of the 23-page report, PB-81099 *(The Blankophors, Optical Bleaching Agents of I. G.)*, sell for 75 cents. Supplementary material consisting of reports and correspondence from I. G. Farben files is contained in German in PB-81099-S *(The Blankophors, Reports and Correspondence from the I. G. Files,* April, 1944; microfilm, $4; photostat, $11; 165 pages). Orders for copies of reports should be addressed to the Office of Technical Services, Department of Commerce, Washington 25, D. C., and should be accompanied by check or money order, payable to the Treasurer of the United States.

German Synthetic Detergents Evaluated

A comparative evaluation of certain synthetic detergents and descriptions of research work and plant processes for the production of some synthetic detergents are contained in one of three reports on German synthetic detergents and related products now on sale by the Office of Technical Services, Department of Commerce. The 120-page report, prepared by four O. T. S. investigators, John D. Brankner, William H. Lockwood, Richard H. Nagel and Kenneth L. Russell, also contains an alphabetical trade-name list of all synthetic detergents and most textile auxiliaries made in Germany. Composition of the detergents and reference to the source of information is also given.

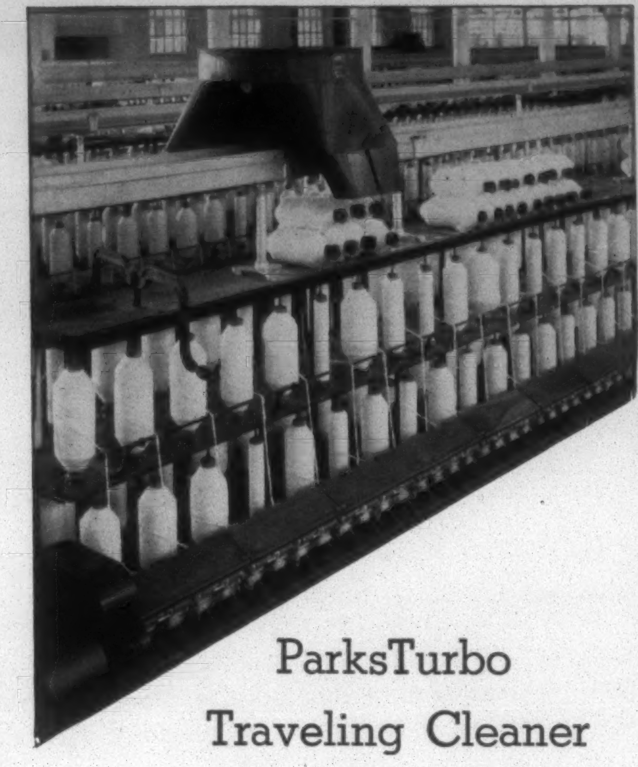
A variety of synthetic detergents were produced in Germany during the past ten years, according to the report. Some of the new detergents were superior to previous types for special uses but none surpassed the Gardinol and Igepon types for general utility. For some types, interesting advances were made in continuous processes. Several reasons are advanced for the large number of synthetic detergents developed in Germany, according to the investigators. The original and fundamental reason was to obtain products which would perform better than soap, particularly in hard water and under neutral or acid conditions. The following types of detergents were accordingly developed: alkyl sulfates, Igepon types, Medialans, polyethylene oxide types, alkyl sulfonates, alkyl aryl sulfonates and Lamepons. In developing the various types it was found that variations of the molecular structure of the compounds of each type often led to products more suitable for certain specific uses than could be obtained from any one compound of the group. Additional detergents, therefore, were produced.

Mimeograph copies of the report, PB-81819 *(Synthetic Detergents and Related Surface Active Agents in Germany)*, sell for $3.

A second report, PB-80749 *(Action of Alkali Upon Cellulose;* photostat, $6; microfilm, $2; 88 pages), is a translation of a research report prepared at the I. G. Farben Textile Application Laboratory, Hoechst. The translation was made at the request of the research and development branch of the Office of the Quartermaster General. The research included a systematic investigation of alkalies and their effect upon cellulose with a view towards lengthening the wear life of cellulosic fibers such as cotton and rayon. The alkalies are used in one form or another in various stages of textile processing and are also present in both home and commercial laundering compounds. The report indicates that alkalies act upon cellulose in widely varying degrees. Some studies showed them to be quite harmful and others gave evidence that their effect is negligible. The information compiled in the research report should prove helpful to textile manufacturers, laundries, and manufacturers of wet processing and washing agents, according to the Office of the Quartermaster General. Orders for the reports should be addressed to the Office of Technical Services, Department of Commerce, Washington 25, D. C.

Report Describes Novel Drying Tower

A novel drying tower used in the production of coated fabrics by Siemens-Schuckertwerke, A. G., Germany, is described in a short report now on sale by the Office of Technical Services, Department of Commerce. The report, prepared by O. T. S. Investigator Fred S. Perkerson, is a supplement to PB-2335, *Survey of German Coated Fabrics Industry,* prepared by O. T. S. Investigators DeForrest Lott and William D. Hedger. The manufacture of polyvinyl chloride fabrics and films by use of a paste dispersion method as described in the main report by Lott and Hedger is considered by American investigators as being the most outstanding development in the German coated fabrics industry. The resin, plasticizer, and pigments were mixed together, applied in the form of a paste and then fused under high heat. The process produced a tough, flexible film or coating.



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MILL NEWS

CONSTRUCTION, NEW EQUIPMENT, FINANCIAL REPORTS, CHARTERS, AWARDS, VILLAGE ACTIVITY, SALES AND PURCHASES

Cherokee Falls, S. C.—Henrietta Mills was forced to stop operations for two days recently when a fire of undetermined origin damaged the power control tower of the plant. The fire was extinguished by the mill's sprinkler system.

Charlotte, N. C.—Leading Embroidery Co., North Bergen, N. J., which previously had announced plans to establish two plants in Charlotte for the manufacture of tobacco cloth and embroidered goods, has announced plans for a third plant here for the production of print cloth. The firm is spending about $500,000 on its plants here and the placing of machinery is now underway.

Opelika, Ala.—The name of the Pepperell Mfg. Co. plant here, known in the past as Opelika Division, has been changed to Pepperell, Alabama Division.

Danville, Va.—Dan River Mills completed the intermediate phase of its $10,000,000 modernization and re-equipment program during 1947. The program of modernization includes: erection of a $1,750,000 steam power generating plant convertible from coal to oil or from oil to coal; installation of 812 new looms at a cost of nearly a million and a half dollars; construction of a $500,000 water filtering plant doubling previous capacity to permit the mill to take care of increased dyeing and finishing requirements; installation of $2,500,000 worth of new dyeing and finishing equipment; and erection of an $800,000 warehouse for both raw cotton and finished goods.

Boston, Mass.—The annual report of Pacific Mills for 1947 reveals record sales of $90,646,658 which compared with a volume of $78,303,654 in 1946. The company earned $8,375,380 after all expenses, taxes of $7,751,000 and a further addition to the contingency reserve of $3,000,000 on the 873,453 shares of stock outstanding at the end of the year, net was equal to $9.59 per share. Concerning construction and expansion of facilities, the report states: "Early last fall the company started construction of a worsted and woolen finishing plant at Brookneal, Va., where fabrics produced at the Southern units will be finished, and it hopes by Spring to have another worsted cloth mill under construction in the same general locality, in order to further decentralize manufacturing. During the year the two new worsted and woolen plants at Halifax, Va., and Carrboro, N. C., steadily increased their production. Work was finished in re-equipping the Rhodhiss, N. C., unit for manufacture of rayon and wool blended fabrics."

New York, N. Y. — Consolidated net sales of J. P. Stevens & Co., Inc., amounted to $224,272,040 for the fiscal year ending Oct. 31, 1947, according to the annual report to stockholders released recently. The net income of $28,509,657, or $8.24 per share on the 3,459,988 shares outstanding throughout the fiscal year, includes not only the profit realized on the company's own goods but all other incomes such as dividends, interest, profit on sale of securities and income derived from services rendered to other companies. The company's working capital increased by $10,603,000 from $56,614,000 Oct. 31, 1946, to $67,217,000 on Oct. 31, 1947.

Rock Hill, S. C.—Plans have been announced for construction of new general show rooms, offices and mill fronts for Samarkand Rugs, Inc., and Rock Hill Yarn Mill, Inc.; both firms are headed by R. A. Postlethwaite. Samarkand is planning construction of a new rug mill soon. Architects' plans for the plant were completed some time ago; however, all bids submitted were rejected. Plans will be revised at a late date, it was announced.

Ware Shoals, S. C.—The Quarter Century Club of Ware Shoals Division, Riegel Textile Corp., held its second annual banquet Jan. 24 at which time 14 new members were initiated. The new members are: F. C. Cook, Mrs. Eunice D. Gregory, Mrs. Hattie H. Mays, Mrs. Mollie B. Hellams, John O. Davis, E. L. Teague, C. W. Futch, M. M. Richey, H. E. Watkins, Miss Ollie Satterfield, Mrs. Bessie T. Campbell, Jessie Gilchrist, Murray T. Miller and Wister N. Robinson.

Gaffney, S. C.—Paola Mfg. Co. has applied for a state charter to produce fine fabrics. To be capitalized at $300,000, the firm's officers are listed as Lyman A. Hamrick, president; John M. Hamrick, secretary; and W. C. Hamrick, Sr., treasurer. The plant will be located in the yarn processing building of the former Irene Mills here. The Hamricks, who recently sold the Hamrick and Limestone Mills to M. Lowenstein & Son of New York, also operate Alma, Musgrove and Carolina Kraft Mills in Gaffney and Broad River Mills at Blacksburg, S. C.

Lumberton, N. C. — Jennings Cotton Mills, closed since last July, was scheduled to be in full operation again by March 1. M. S. Dayan of New York City is owner of the mills. When complete operation gets underway the mills will process cotton from the bale through yarn and knitting plants and bleachery, and turn out bleached and dyed knit cloth.

Kings Mountain, N. C. — Walmore Mills, Inc., a new firm here, was expected to begin the manufacture of Turkish towels on or about Feb. 20. The new concern leased the York road building owned by Troy Whitehead of Charlotte, and formerly owned by Betty Yarn Mill. H. C. Moore, general manager, said the firm expected to conduct a two-shift operation, employing from 75 to 100 persons.

Granite Falls, N. C.—Dudley Shoals Cotton Mill Co. has been purchased by Shuford Mills, Inc., of Hickory, N. C. The deed, representing a transaction of approximately $200,000, has been filed in the office of the register of deeds for Caldwell County at Lenoir, N. C. The plant utilizes about 6,000 spindles in the production of 40s single and ply carded yarn on cones, tubes and skeins.

Tarboro, N. C.—Hart Cotton Mills, Inc., are to make an addition of 21,000 spindles and 400 looms. The carding and spinning machinery is to be furnished by Saco-Lowell Shops and the plans are being prepared by J. E. Sirrine Co. of Greenville, S. C.

Rockingham, N. C.—Operating supervisors of Aleo Mfg. Co. have formed a Supervisor's Club. Purpose of the club is to provide a means of sharing experiences and to enlighten each departmental supervisory force with the problems of others. The following officers were elected to serve six months: W. W. Harris, spinning room overseer, president; Lacey Goodwin, company policeman, treasurer; and Crook G. Stafford, controller, secretary.

Anderson, S. C.—Final plans for construction of a new textile mill, to be financed through community effort, were made recently at a board meeting of Anderson Industrial Buildings, Inc. The plant will be leased to Haynesworth Mill, formerly known as Rayotta Mill.

Experiment, Ga. — The dye plant of Dundee Mills, Inc., Griffin, Ga., are to be transferred to a new $175,000 addition under construction at Lowell Bleachery here. Bleaching and dye plants are expected to be in operation by April. The move centralizes bleaching and dyeing operations. Lowell Bleachery is to be improved, at a cost of $300,000, with new machinery, including a continuous open-width bleach machine using a hydrogen peroxide bleach entirely. A new towel dryer and new tenter frames are to be installed, also. The dye plant will have a new continuous vat dyeing machine, sulphur dyeing equipment, single and double tenter frames. A testing laboratory also will be constructed.

Statesville, N. C.—The name of Duchess Throwing Mill here has been changed to Statesville Throwing Mill. The plant, which produces a diversified line of rayon yarns, is a division of William Klopman & Sons, Inc., and was purchased from Burlington Mills Corp. last year.

Hazlehurst, Miss.—The R. D. Sanders Corp. is installing machinery in a new building here, financed through community effort, and will produce open-weave cloth from cotton. The plant will operate on three shifts and will employ about 400 persons.

Montgomery, Ala. — Huntsville Mfg. Co. and California Cotton Mills, Uniontown, shared first place honors in Alabama's 1947 Textile Safety Contest, the State Department of Industrial Relations announced Jan. 29. Huntsville Mfg. Co. led the weaving and spinning group with only one lost time injury during the year and an accident frequency rate of .33. California Cotton Mills, with one injury and a rate of 1.41, was first in the spinning division. Second places went to Tallassee Mills in weaving and spinning and Linen Thread Co. of Anniston in spinning. Third place honors were won by Russell Mfg. Co. of Alexander City in the weaving and spinning classification and Boaz Mills, Inc., in the spinning group.

Chattanooga, Tenn.—Dixie Mercerizing Co. has awarded construction contracts on an improvement program which calls for an expenditure of more than $300,000. The program calls for substantial alterations to Dixie's present buildings at Lupton City and Ridgedale, and for the erection of a new warehouse at the mercerizing plant in Ridgedale.

Anderson, S. C.—Reorganization of the H. C. Townsend Cotton Mill has been effected, with Harry L. Dawes of Greenville, S. C., as president and treasurer, E. E. Stone, III, of Florence, S. C., as vice-president, and E. H. Johnson as secretary. The 4,232-spindle plant produces coarse cotton yarns.

Lavonia, Ga.—Albert J. Bartson, Inc., Midland Park, N. J., plans to start construction soon on buildings to house an upholstery fabrics manufacturing unit. Plans call for a main building 400 by 90 feet, a dye plant and smaller auxiliary structures, all of concrete and brick construction. Bartson operates a plant in Charlotte, N. C., and it is intimated in the trade that operations of that plant will be transferred to Lavonia upon completion of the buildings.

Roanoke, Va.—The Roanoke plant of American Viscose Corp. recently was awarded the Neren Safety Trophy, presented annually to the one plant of the corporation with the best safety record for the previous year. The trophy is a bronze plaque named for Harry C. Neren, for many years manager of the Roanoke plant, and who is regarded as the father of the corporation's safety program.

Reddell, La.—Evangeline Textile Mills Co. has been organized here and plans are underway for construction of a 25,000-spindle plant to produce yarns and finished materials. The plant, which will cost an estimated $1,500,000, will be a "home enterprise," officials emphasized, being owned and controlled by natives of the section, and operating for the general benefit of the area. Officers of the concern are Albert Tate of Ville Platte, president; Aubrey G. La Haye of Reddell, vice-president; Adraste Landreneau of Mamon, secretary-treasurer; Maj. F. J. LeBlanc of Ville Platte, financial counselor; and E. Herman Guillory, district attorney of Evangeline Parish, general counsel.

Easley, S. C.—Conditional sale of Glenwood Cotton Mills was reported recently, the sales agreement reportedly providing for payment of $350 per share for $100-par stock, provided two-thirds or more of the outstanding shares were tendered by Feb. 25. The identity of the proposed purchaser has not been revealed.

Elkin, N. C.—The Distinguished Service Safety Award of the National Safety Council was presented to Chatham Mfg. Co. during a banquet Jan. 20. The firm is one of two textile concerns in the nation to be awarded the honor a second time.

Cite Improvements In Freight Movements

Movement of textiles and other freight over the lines of the Southern Railway system is on a current basis today, with all prior difficulties overcome, and with new improvements in service expected in the near future, J. Ralph Legg, superintendent of merchandise service of the railway at Chattanooga, Tenn., told members of the traffic group of the Association of Cotton Textile Merchants of New York at a meeting last month. Mr. Legg, with Robert N. Woodall and Herbert E. Wilson, Jr., of New York, were guests of the traffic group in its latest meeting aimed at the expediting of textile shipments from the South to the Metropolitan area and to other points. Mr. Woodall is Eastern traffic manager and Mr. Wilson is district freight and passenger agent of the Southern Railway system in New York. Thomas Smith, chairman of the group, presided.

Mr. Legg outlined in detail the movement of textile freight from records of the past month, reporting improved handling, and citing the values of segregation of freight by the mills when loading trap cars. Elimination of small transfer points where volume of traffic was insufficient, and development of the new transfer point at Greenville, S. C., which should be ready for business before the end of February, were noted as changes which will expedite traffic. Mr. Woodall also expressed the desire of the Southern to co-operate fully for better service for textile interests.

In a check-up of traffic group members attending, it was the consensus of opinion that service to the Metropolitan area has improved to a considerable extent since the group took up the issue of long periods in transit last fall in the course of discussions with officials of the Pennsylvania Railroad. However, even allowing for recent interruptions from storms, it was felt that periods in transit are still not normal. While in-transit time from the South as far as Jersey City was reported improved, considerable difficulty and constant checking was necessary in the view of a number of those Some members reported unsatisfactory service to Chicago who commented on the situation, in order to ameliorate the situation from that point to consignee's place of business, and intermediate points and more customers in that area asking for motor truck delivery. Several members congratulated the Southern on the character of its service to the trade. The Southern Railway officials informed the group that a new package car service directory is now in preparation. New schedules of the Central of Georgia Railway Co. for less than carload shipments from Coulmbus and Macon, Ga., to Eastern territory were distributed to the group.

Virginia-Carolina Buys Aralac Plant

Aralac, Inc., subsidiary of National Dairy Products Corp., has abandoned the production of Aralac casein fiber and the plant at Taftville, Conn., has been sold to Virginia-Carolina Chemical Corp. for the production of a synthetic fiber from peanut protein, a product in which the chemical company has been interested for some time. Actual transfer of the plant was scheduled to have been made Feb. 17.

"We are discontinuing the manufacture and sale of Aralac, even though this project resulted in a substantial profit to the company," L. A. Van Bomel, president of National Dairy Products Corp., remarked. "Development of other more profitable uses for skim milk products has resulted in a marked increase in the cost of casein from which Aralac is made."

Virginia-Carolina Chemical Corp. has engaged in vegetable protein fiber research for many years and has operated a pilot plant at its Carteret, N. J., research laboratory. During the earlier stages of this research program, the company maintained contact with the several regional research laboratories of the United States Department of Agriculture, particularly with the Northern Regional Research Laboratories at Peoria, Ill. According to W. P. terHorst, general manager of the fiber division of the company, the protein staple fiber developed as a result of this research is believed to be the first of its kind to be produced commercially in the world. The product will be sold under the trade name *Vicara* in varying deniers and staple lengths.

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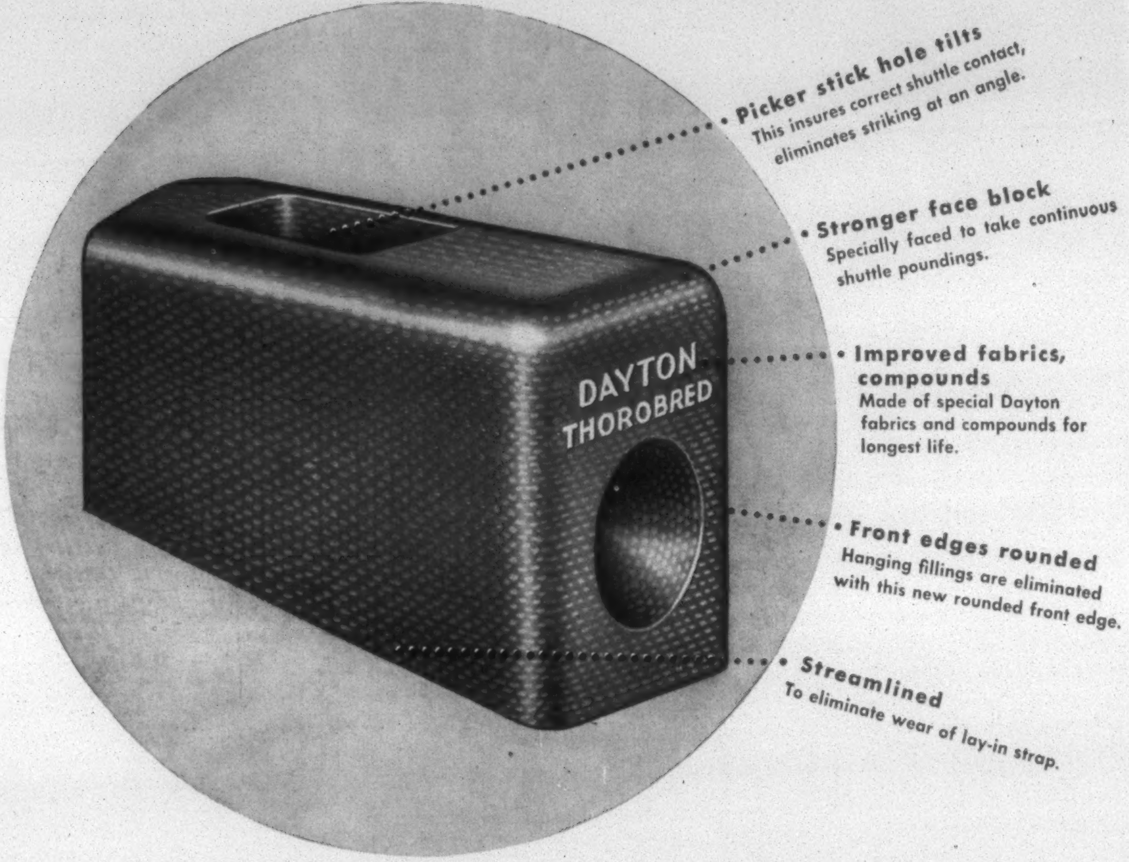
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PERSONAL NEWS

Thurmond Chatham, chairman of the board of directors of Chatham Mfg. Co., Elkin, N. C., recently announced his candidacy for the Democratic nomination for the Fifth District of the U. S. House of Representatives. The primary will be held May 29. Other textile executives making political news are R. Grady Rankin, president of Superior Yarn Mills at Mount Holly, N. C., and a director of Textiles, Inc., Gastonia, N. C., who will be a candidate for re-election to the N. C. State Senate. . . . D. Abbott Turner, textile executive of Columbus, Ga., who has been named to the Columbus City Commission. . . . T. Henry Wood, general manager of Oconee Mills, Inc., Westminster, S. C., was elected mayor of Westminster.

Lee F. Caldwell, a graduate of Georgia Tech in the class of 1931, has been appointed to the newly created position of shop production engineer for Southern States Equipment Corp., Hampton, Ga.

Victor F. Williams, formerly assistant superintendent of Federal Prison Industries, Atlanta, Ga., has been appointed superintendent of Piedmont Cotton Mills at Egan, Ga.

George W. Stowe, formerly secretary-treasurer of Crescent Spinning Co., Belmont, N. C., was elected president and treasurer at a recent meeting of directors. Mr. Stowe succeeds the late A. C. Lineberger, Sr., as president. A. C. Lineberger, Jr., was elected a director to succeed his father. S. P. Stowe was elected vice-president and George W. Stowe, Jr., was named secretary and assistant treasurer at Crescent. . . . Directors of Perfection Spinning Co., Belmont, recently elected J. Harold Lineberger president of the firm, succeeding his father, A. C. Lineberger, Sr. Other Perfection officers named are Henry A. Lineberger, vice-president, and D. P. Stowe, secretary-treasurer.

A. L. Brown, general manager and vice-president of Cannon Mills Co., Kannapolis, N. C., has been elected to the presidency of China Grove (N. C.) Cotton Mills, succeeding the late A. C. Lineberger, Sr. John H. Rutledge, Jr., assistant secretary of the mill, was elected vice-president and C. J. Beaver was re-elected secretary and treasurer.

Legare Comer Jennings, president and treasurer of Cowikee Mills, Inc., Eufaula, Ala., was married Jan. 4 to Elizabeth Connors of Ponte Vedro, Fla.

Fred Allen, former general manager of the Gastonia, N. C., plant of Bloom Mills, Inc., has been named plant superintendent at Bloom Mills of Lancaster (Pa.), Ltd.

Ernest T. Boger, manager and vice-president of Boger & Crawford Spinning Mill, Lincolnton, N. C., has been elected president of the Lincolnton Chamber of Commerce.

John B. Humbert, manager and assistant treasurer of the Seneca, S. C., plant of Utica & Mohawk Cotton Mills, Inc., is retiring from that position March 1 after having spent 46 years in the textile industry. Mr. Humbert entered the industry in 1902 as secretary of Chiquola Mfg. Co. at Honea Path, S. C.

Earle R. Stall, president of F. W. Poe Mfg. Co., Greenville, S. C., for 12 years, and president of Florence Mills at Greenville, a Cone Mills Corp. subsidiary, for five years, has resigned from the Poe connection to devote his full time to Florence Mills and the interests of the Cone Mills Corp., of which he is a director. Mr. Stall will be succeeded at Poe by Charles A. Gibson, president of Calhoun (S. C.) Mills, owned by Ely & Walker Dry Goods Co. of St. Louis, Mo., who recently acquired the F. W. Poe Mfg. Co.

James E. Bostick, left, superintendent of Haleyville (Ala.) Mfg. Co., Inc., recently was voted "Man of the Year" by citizens of Haleyville. Mr. Bostick was tendered this honor because of his civic activities.

T. G. Roche has resigned as general manager of Raycord, Inc., Spartanburg, S. C., to become plant manager of Hamrick & Limestone Mills at Gaffney, S. C., a division of M. Lowenstein & Sons Co.

B. W. Barrier has succeeded E. J. Wentz as superintendent and vice-president of Carolina Fine Fabrics, Inc., Hickory, N. C.

Warren L. Chaffin has been elected president of J. L. Stifel & Sons, Inc., Wheeling, W. Va., producers of fabrics for men's and boys' apparel. Mr. Chaffin also is president of the Stifel subsidiary, Glendale (S. C.) Mills.

John C. Borden, son of Gen. Howard S. Borden, has been elected president of Borden Mills, Inc., succeeding Bertram H. Borden, who becomes chairman of the board. General Borden was elected first vice-president; Arthur B. Borden, vice-president and treasurer; and William J. Still, vice-president in charge of manufacturing. The product of Borden Mills will continue to be sold in association with Iselin Jefferson Co., Inc., it was announced.

Eugene Dye has been promoted from superintendent to production manager of Lavonia (Ga.) Mfg. Co.

Cleveland L. Adams has been named technical director of the Lanett (Ala.) Mill of West Point Mfg. Co. Mr. Adams has been associated with the research division of West Point Mfg. Co. as head of the processing department for a number of years.

John W. Rettew of the purchasing department of Burlington Mills Corp. is soon to make his headquarters at the Cramerton, N. C., plant of the firm where he will handle local purchasing for the Cramerton, Modena, Flint, Ranlo and Phenix Plants.

Howard K. Edgerton was re-elected president of Lebanon (Tenn.) Woolen Mills for his 11th term at the recent annual meeting of the board of directors. Henry Counts and John Morrison were elected vice-presidents. Directors named are Walter J. Baird, Willard H. Blue, Roy O. Crips, Virginia W. Edgerton, J. Elmer Hahn, E. Stanley Klein, John F. Robertson, Mr. Edgerton and Mr. Counts.

William D. Anderson, former president of Bibb Mfg. Co., Macon, Ga., and now chairman of the board of directors, completed 50 years service with the firm Jan. 30 and was honored at a stag dinner in Atlanta, Ga., sponsored by Mills B. Lane, Jr., member of the Bibb board and president of the Citizens & Southern National Bank of Atlanta. Personnel changes announced in Bibb mills at Columbus, Ga., follow: C. E. Down has resigned as superintendent of the Anderson Plant and has been succeeded by MacAllister Isaacs, Jr., who has been technical superintendent of Columbus Mfg. Co., a Bibb subsidiary. . . . R. N. Sewell, who has been charged with the duties of office manager at Columbus, is now devoting part of his time to the technical phases of the plant proper.

R. T. LeGrand, Jr., formerly secretary and assistant treasurer, was advanced to treasurer of Shelby (N. C.) Cotton Mills at a recent meeting of stockholders. R. T. LeGrand, Jr., was re-elected president of the firm and George Blanton, Sr., vice-president.

R. F. Mills, for the past three years superintendent of Jefferson (Ga.) Mills, Inc., has been appointed president and treasurer of Gibson Yarn & Weave Mills, Inc., Dallas, N. C. Other officers of the firm are George B. Mason, vice-president; O. F. Mason, Jr., secretary; and A. L. Sudduth, Jr., assistant secretary.

Frank Pittman has been appointed superintendent of Gurney Mfg. Co., Prattville, Ala. Previously he had served for eight years as superintendent of California Cotton Mills Co., Uniontown, Ala.

J. Fred Slaughter is now associated with Slaughter Machinery Co., covering Georgia, Alabama and Tennessee in the sale of Mount Hope equipment for finishing plants, Venango rotary and package dyeing machines, Macbeth, Atlas and other special lines of textile equipment. He has established residence in Marietta, Ga.

Hugh G. Chatham has been elected a vice-president of Chatham Mfg. Co., Elkin, N. C. Mr. Chatham is a son of Thurmond Chatham, chairman of the board of the company, who was re-elected by the directors. Other officers of the firm re-elected are: Albert L. Butler, president; James H. Lassiter, assistant to the president; Thomas J. Sheehe, J. W. L. Benson and Eleanor S. Taylor, vice-presidents; W. R. Hartness, treasurer; C. D. Dixon, assistant secretary; J. Milton Cooper, general counsel; R. W. Harris, general superintendent; Fred L. Neaves, superintendent; Earl M. Hodel, Thomas M. Roth and Howard C. Hatch, assistant superintendents. . . . Hugh Chatham also was elected president of the board of directors of the Elkin Y. M. C. A.

W. Ray Bell has been re-elected president of the Association of Cotton Textile Merchants of New York. Other officers are Robert T. Stevens, J. P. Stevens & Co., Inc., vice-president; John C. Hughes, McCampbell & Co., Inc., treasurer; and John L. Severance, secretary. Saul F. Dribben, Cone Export & Commission Co., Inc.; Richard G. Conant, Wellington Sears Co., Inc.; and Donald B. Tansill, Pepperell Mfg. Co., were appointed to serve with the officers as an executive committee for the year.

Dr. Frederick T. Peirce, due to ill health, has resigned as director of research for the School of Textiles, North Carolina State College, Raleigh, and has sailed for Australia, his homeland. . . . Gerald B. Fletcher, formerly with Bibb Mfg. Co., has joined the staff of the A. French Textile School of the Georgia School of Technology, Atlanta, as associate professor in textile engineering.

A. M. McNeill, C. M. McClure, Jr., I. R. Jermyn, W. R. Fox and Paul Bruchon have joined Hunt Machine Works, Inc., Greenville, S. C., as sales representatives. Mr. McNeill will represent the firm in Georgia, Alabama and Mississippi. . . . Mr. McClure will be the South Carolina representative and Mr. Jermyn will cover North Carolina and Virginia. . . . Mr. Fox has been placed in charge of New England sales and Mr. Bruchon will be affiliated with Hunt in New York, handling export sales.

James T. Gordon has been appointed Southern representative for the makers of Cloverleaf-Freeland Bobbins, who operate plants in Hazleton and Honesdale, Pa. Mr. Gordon will be located at 1013 Woodside Building, Greenville, S. C.

H. S. Foy, Jr., has retired as sales manager of Indera Mills Co. of Winston-Salem, N. C., after having held that position for the past 33 years. He will retain his directorship in the organization. George W. Sheek, Jr., formerly Southern division sales manager, has been named to succeed Mr. Foy.

William H. Ruffin has been elected president and treasurer of Erwin Cotton Mills Co., Durham, N. C., succeeding as president K. P. Lewis, who was elected chairman of the board. Mr. Ruffin had been vice-president and treasurer of the company since 1942. All other officers were re-elected as follows: Carl R. Harris, vice-president and assistant treasurer; Frank T. de Vyver, vice-president; E. W. Dunham, secretary; N. A. Gregory, assistant secretary; and L. C. Thomas, assistant secretary. It was also announced that Edwin M. Holt has been made general manager of manufacturing and assistant to Mr. Harris.

Walter B. Dillard has been appointed assistant manager of the Alabama Division of California Cotton Mills Co., Uniontown, Ala. Mr. Dillard previously was associated with Pomona Mfg. Co., Greensboro, N. C., and New Braunfels (Tex.) Textile Mills, Inc.

E. Lee Skipper, left, has retired as vice-president in charge of production of Springs Cotton Mills, with head main plant and headquarters at Lancaster, S. C., and other plants at Chester, Fort Mill and Kershaw, S. C. Mr. Skipper, who has been associated with the Springs organization since 1914, held various managerial positions during his career and was responsible for numerous innovations in textile mill operation. He has not announced his future plans, but states that he intends to continue in the textile industry.

Culver Batson has been appointed night superintendent at the Riverside Division of Dan River Mills, Danville, Va.

Eugene B. Luck, vice-president of Wortendyke Mfg. Co., Richmond, Va., has been elected to the board of directors of the company. J. Rucker Ryland has been elected a vice-president and A. L. Waldrop, secretary, has been named secretary and treasurer.

W. M. Melton, vice-president and general manager of Pisgah Mills, Inc., Brevard, N. C., has been elected a director of Transylvania Trust Co. at Brevard. He is also serving his third term on the Brevard board of aldermen. . . . R. O. Arnold, president of Covington (Ga.) Mills, has been named a director of the Atlanta Gas Light Co. He is also a director of Mobile (Ala.) Gas Service Corp. . . . Fred L. Smyre, Jr., president and treasurer of A. M. Smyre Mfg .Co. and a member of the Gastonia (N. C.) City Council, and Albert G. Myers, Jr., assistant treasurer of Threads, Inc., as well as a director of Textiles, Inc., have been elected to the board of directors of the Citizens National Bank at Gastonia.

Crawford H. Greenewalt has been named president as well as chairman of the executive committee of E. I. du Pont de Nemours & Co., Inc. He succeeds Walter S. Carpenter, Jr., who becomes chairman of the board following the retirement of Lammot du Pont. . . . Dr. William A. Adamson, pioneer in dye research, retired from Du Pont Feb. 2 after 30 years with the company.

William A. Karl has been named president of Firestone Textiles, it was announced Feb. 6. Mr. Karl, who has been vice-president of Firestone Textiles for the past seven years, is in charge of textile plants at Gastonia, N. C., Bennettsville, S. C., and New Bedford, Mass. He also heads up the Textile Division of the Firestone Tire & Rubber Co. Since 1940, he has been a member of the New York Cotton Exchange. Headquarters of Firestone Textiles will be maintained in Akron, Ohio.

L. E. Taylor, since 1939 Southern agent of the National Ring Traveler Co., with headquarters in Charlotte, N. C., has been made general manager of the company and in the near future will move to Pawtucket, R. I., where the plant is located. His appointment to the new position marks the completion of 25 years of service with the organization. Mr. Taylor has been succeeded as Southern agent by H. B. Askew, formerly of Griffin, Ga. Mr. Askew, who has been with the company 15 years, has transferred his residence to Charlotte and will have charge of the Southern office and warehouse in that city. W. Harry King of Atlanta, a graduate of Clemson College and veteran of World War II, recently has joined the Southern sales staff and will take over the Georgia territory formerly covered by Mr. Askew.

Woodward Allen has been appointed manager of the branch office at Charlotte, N. C., of Solvay Sales Division, Allied Chemical & Dye Corp., covering the Southeastern territory. Mr. Allen, who succeeds the late Harral O. Pierce, has been with the Solvay organization for 28 years, serving as manager of the Boston office since 1930. H. W. Causey, formerly a sales representative, has been named assistant manager of the Charlotte office.

Paul D. Jacobs, left, has joined the textile research and development staff of the Onyx Oil & Chemical Co. laboratories. From 1943 to 1947 he was with the textile research laboratories of the American Cyanamid Co.

Archie McDuffie, formerly with Jennings Cotton Mills at Lumberton, N. C., has become superintendent of Carolina Mills, Weldon, N. C., now a subsidiary of Carolina Mills at Dillon, S. C. It formerly was known as Weldon Knitting Mills.

Maj. Stuart W. Cramer, who retired from active participation in the textile business some months ago when the Cramerton (N. C.) Mills of which he was president were sold to Burlington Mills Corp., recently has been appointed deputy chairman of the Munitions Board by Secretary of Defense Forrestal. . . . . John F. Tinsley, president of Crompton & Knowles Loom Works, Worcester, Mass., recently was presented the Officier de la Legion d'Honneur medal by French Consul Albert Chambon at the French consulate in Boston. Mr. Tinsley was cited for contributions in "effort and energy to the France that suffered and fought underground through the years of

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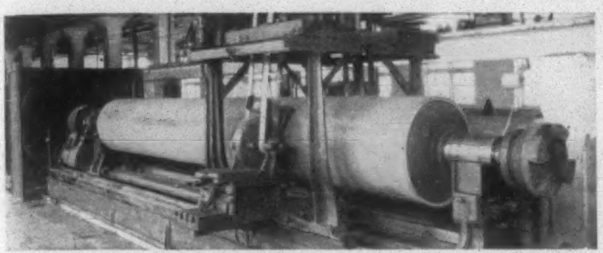

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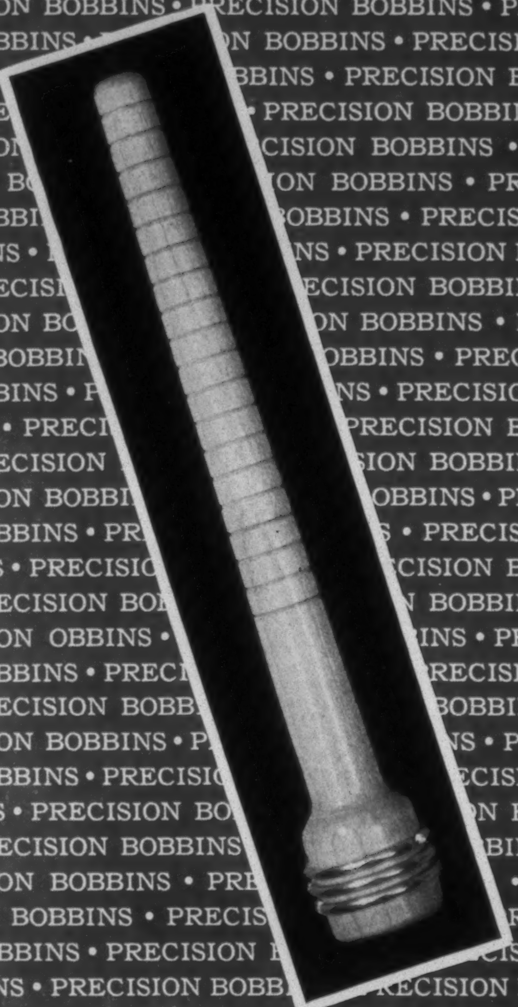

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Nazi invasion." . . . . W. T. Kennedy, manager of the Pepperell Mfg. Co. bleachery at Opelika, Ala., has been presented the Silver Beaver, highest award made by the Boy Scouts to a civilian leader.

John B. Teat, formerly overseer of carding and spinning for Diana Mills, Inc., Neuse, N. C., now is overseer of spinning, twisting and winding at Algodon Mfg. Co., Inc., Bessemer City, N. C.

T. O. Ward has retired from his position as overseer of the spinning department of the Revolution plant of Cone Mills Corp., Greensboro, N. C.

Harry L. Welsted and Howard A. Lovejoy have joined the sales staff of Monsanto Chemical Co. and will work principally in the textile industry in the Carolinas and Georgia, making their headquarters in Charlotte, N. C. . . . Milton J. Scott has been appointed assistant director of research for Monsanto's Merrimac Division at Everett, Mass., where he will supervise textile research and application.

Henry and Earl Groves, owners of Groves Thread Co. of Gastonia, N. C., recently contributed $50,000 to a fund for building a new 50,000-seat football stadium at Winston-Salem, N. C., for Wake Forest College. The school is scheduled to be moved from its present location to Winston-Salem within a few years. The Burlington Mills Foundation contributed $15,000 to the building fund for the new college. . . . . Herman Cone of Greensboro, N. C., president of Cone Mills Corp., has contributed $25,000 to Greensboro Boy Scouts for a new camp site.

Charles A. Cannon of Concord, N. C., president of Cannon Mills Co., was one of the four North Carolinians named to honorary membership in the Duke National Council at Duke Day ceremonies at Duke University, Durham, N. C. . . . . J. O. Thomas of Fieldcrest Mills, Spray, N. C., has been elected president of the Rockingham-Caswell Duke University Alumni Association. . . . . R. D. Sanders of Jackson, Miss., head of Sanders Industries and widely known in the textile industry, has been named chairman of the industrial division of the Mississippi State College Alumni Association's drive to raise one million dollars for a Student Union Memorial Building at Starkville, Miss.

Marshall B. Hall has been elected president and a director of the Trust Co. of Georgia, Atlanta. Mr. Hall was a vice-president.

OBITUARY

Douglas F. Williamson, 45, general manager of Lavonia (Ga.) Mfg. Co., died recently at an Atlanta, Ga., hospital following an illness of three weeks. Mr. Williamson formerly had been connected with the Linen Thread Co., Blue Mountain, Ala., plant, and Shuford Mills of Hickory, N. C. He is survived by his wife, a son and a daughter.

Lester Durrett Coltrane, Concord, N. C., a vice-president of Linn Mills Co. at Landis, N. C., died Jan. 30 after an illness of several weekss. Mr. Coltrane also had served as an officer and director of Norwood Mfg. Co. Surviving are his widow, a son and a daughter.

Moses T. Stevens, 76, vice-president of M. T. Stevens & Sons Co., operators of a chain of textile mills in New England, died Feb. 4 at his home in Boston, Mass., following a heart attack. Mr. Stevens is survived by three sisters.

James Allen Jenkins, 77, retired textile mill superintendent of Clinton, S. C., died Feb. 6. Mr. Jenkins was the first superintendent of Mills Mill at Woodruff, S. C., when it was known as Gray Cotton Mill, and during his long career was connected with many plants throughout South Carolina. Surviving are his widow and a daughter.

Ernest Lorraine Starr, 62, well known public relations specialist and a former director of the Rayon Institute of America and the Durene Association, died recently at his home in Winston-Salem, N. C., of injuries sustained last Nov. 27 when he was struck by an automobile. He is survived by his wife.

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EQUIPMENT — SUPPLIES — LITERATURE

New Sjostrom Instrument Designed To Count Threads

A new instrument for counting threads automatically by means of an electric eye has been announced by the Sjostrom Machine Co., Lawrence, Mass. The Electronic Pick-O-Meter is an aluminum case 30 inches long, 24 inches high, 18 inches deep, and weighs 65 pounds. To operate the unit a sample of cloth is placed under a glass plate, a switch is snapped, and in 30 seconds the number of threads for two inches registers on a dial. This is accomplished by a light source, optical system and photo tubes.

The optical system automatically focuses a tiny beam of light less than 1/1000 of an inch wide on the sample to be counted. This light moves across two inches of the fabric and the very slight differences of the light volume between the threads are amplified by ten radio tubes to energize an electric counter. Absolute accuracy is claimed for the machine. There is no possibility of human error and the arduous work and eye strain of counting picks one by one with a magnifying glass is eliminated. The unit is available in from eight to ten weeks.

New Shuttle Development Eliminates Common Hazards

Jerk-ins, smutted and rubbed filling, are said to be weaving hazards of the past. The low thread groove shuttle, developed and thoroughly mill tested by the Watson-Williams Mfg. Co., Millbury, Mass., removes these serious and common difficulties, the company claims. This low groove shuttle carries the filling thread down below any possible point of contact between the shuttle and the binder leather. It also lowers the thread below the feeler slots to eliminate the possibility of the thread catching on the feeler as it enters and leaves the shuttle. Other Watson-Williams developments already in wide use include interchangeable shuttle eyes, to allow quick and easy substitution of tension eyes, long a leading product of Watson-Williams, for regular eyes. This feature of Watson-Williams shuttle is especially valuable to woolen and worsted mills which have gone into fine goods or blends, and cotton mills using rayon mixes. Also designed for cotton weaving, the CI-41 Watson-Williams shuttle eye, with the inner hook and the outside lock, permits quick threading and keeps the thread constantly in place.

Dutton Steam Generator Converts To Any Fuel

The C. H. Dutton Co., 630 Gibson Street, Kalamazoo, Mich., is building a new type of package boiler called the Dutton Economist Dual-Fired Steam Generator that eliminates costly shutdowns from present fuel shortages and assures low cost steam in future years by providing conversion to an alternate fuel overnight. The new Economist is shipped with either a gas or oil burner, and grates for coal firing. There is no loss of efficiency when shifting from one type of fuel to another. Neither is any production lost in the changeover because it can easily be made overnight. The change is made by removing the bricking and insulation from the top of the grates when changing to a non-solid fuel. The new Economist is available for use with all three major none-solid fuels, light oil, heavy oil or gas, and for firing solid fuel either by hand or stoker.

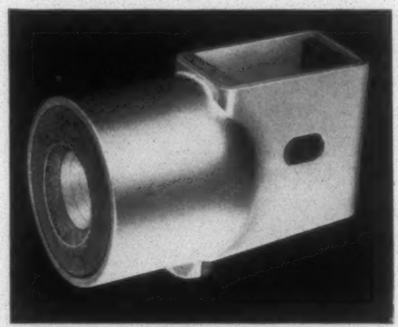
The manufacturer points out that a convertible boiler not only offers a method of alleviating present shortages but also provides protection against the lack of availability or prohibitively high price of any fuel in the future. This means that a whole new steam plant need not be bought should one particular fuel become unavailable or too high priced. The manufacturer also emphasizes that this is not a makeshift, emergency boiler. It is a highly efficient steam generator that has been engineered to use any one of several fuels with an efficiency comparable to any boiler now on the market. A complete description of the new Dutton Economist Dual-Fired Steam Generator with specifications and prices may be obtained on written request to the company.

Spartanburg Supply Firm Changes Name—To Expand

Sunray Awning Shutter Co., Inc., of Spartanburg, S. C., has been issued a charter to change its name to Sunray Co. The firm will add additional machinery and specialize in textile material handling equipment, such as doffing trucks and containers, for both spinning, carding and weaving as well as all other type trucks from all type metals as well as fiber and are offering some new designs which the mills claim are a big advantage over the older types. They will also do special material handling designs and sales engineering. The new Sunray Co. has purchased several acres of land from the Spartanburg Foundation at Camp Croft and are now building an all-metal fire proof building on the new site at a cost of about $25,000. The new charter authorizes issue of $50,000 in stock. The new Sunray Co. is under the management of E. J. Eaddy, H. O. Coddington and T. J. Trimmier. Mr. Eaddy is still active with The Textile Shop and Mr. Coddington was general manager for the Andrews Co., manufacturers of ball bearings and other textile equipment.

Loom Picker Developed By Graton & Knight

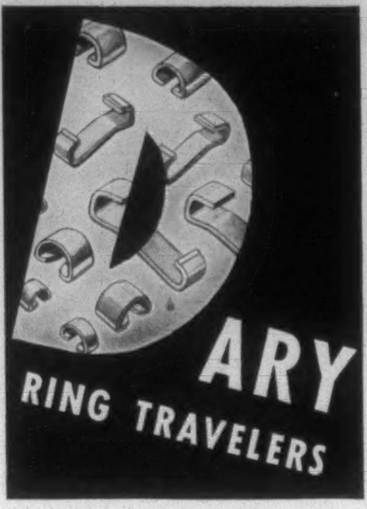
A new high-speed loom picker having a greatly prolonged life, and offering many other important advantages, has just been marketed by Graton & Knight Co., Worcester, Mass. The nose of the new heavy-duty Steel-Hide picker consists of layers of oak-tanned leather and rawhide, cemented together and bonded to the steel shell. The natural resiliency of laminated leather plus the strength and rigidity of the steel shell gives exceptional shock absorption and resistance to deformation. An accurately drilled nose hole receives the impact from the shuttle spur in such a manner that heat is dissipated more rapidly than with other type pickers, giving rise to longer shuttle life.



Named Steel-Hide because of its exclusive steel and leather construction, the new picker is said to have improved shock absorption, with no rebound. The loop is of special patented construction, leather cushioned at the front to give added resistance to impact and rubber lined at back to assure a firm fit on the stick. A formed lip on the loop prevents the picker from "rocking." With these features, proper alignment is maintained for life; the picker cannot work loose or twist off center. The Steel-Hide picker has been thoroughly loom-tested, both in the laboratory and in actual mill operation. It is being marketed in narrow-nose and wide-nose types through leading distributors at regular prices. Mill executives are invited to write for free test samples.

Low Cost Generator Has New Features

The latest improvements of Vapofier—a compact unit producing safe, low-cost gas



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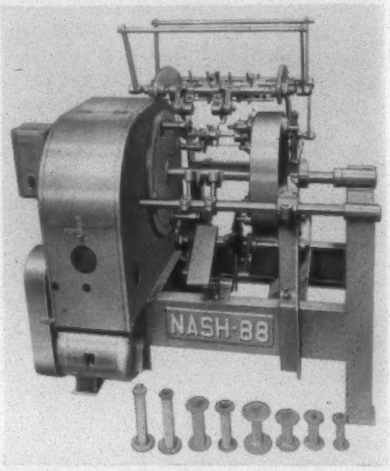
Greensboro Firm To Handle Carbomatic Sales In South

Carbomatic Corp., manufacturers, Long Island City, N. Y., have appointed Textile Specialties Co., Greensboro, N. C., as representatives to handle the sales and servicing of Carbomatic products throughout a territory embracing North Carolina, South Carolina, Virginia, Georgia and Alabama. The products are manufactured by Carbomat's Infra-Red Division, which now manufactures a line of gas-fired and electric infra-red radiant heat equipment for virtually every type of textile heat-processing operation, including drying, curing, carbonizing and singeing units.

Bobbins Refinished On New Automatic Machine

Rapid and uniform refinishing of bobbins on a definite schedule, and elimination of slower hand-refinishing operations are enabled by a new automatic machine introduced by J. M. Nash Co., 2360 North 30th Street, Milwaukee, Wis. Resembling the larger machine used for many years by rayon manufacturers, the new bobbin refinisher is designed for refinishing operations in rayon fabric mills having problems arising from rough bobbins and non-uniform hand-refinishing. The new No. 88 refinisher will perform all refinishing operations at the rate of ten bobbins per minute. Bobbins are hand-fed continuously into the centering wyes, are picked up by headstock and tailstock centers, and are revolved through five refinishing stations. A stationary pickup-and-release feature assures accurate centering action and motionless release when the bobbin drops from the machine.



Uniformity of finish and minimum material removal in relation to condition of the bobbins are possible when using the No. 88 refinisher. The refinishing rack, burnishing fingers, and burnishing shoes are designed to permit rapid change-over from one type bobbin to another: Abrasive cloth is processed in individual pre-form adapted to length of barrel between flanges and height

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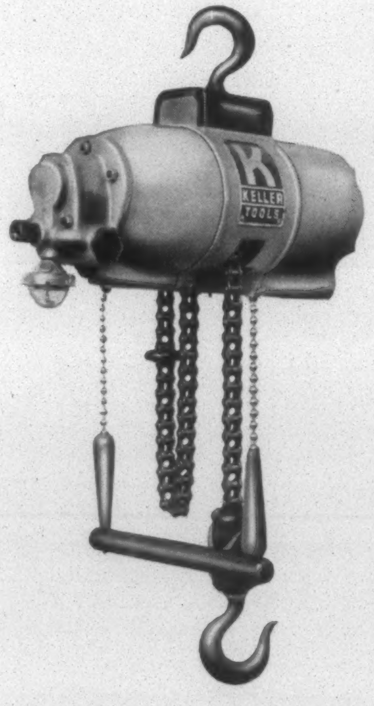
of flange from barrel. Brushes and pads are supplied for same specifications. It is a simple and rapid procedure to insert proper abrasive cloth and brush-pad assembly. The tailstock wheel is also adjustable on the shaft to arrange for different length bobbins. Eccentric crimp collars are adjustable to carry abrasive cloth to proper depth for both barrel and flange sanding. Burnishing shoes have adjustment laterally and for height. Negligible maintenance is claimed for the refinisher. The frame is of welded steel construction with cast iron headstock and tailstock wheels. Spindles are ball-bearing equipped and are driven by two V-belts. All gears and worms are precision-machined and jig-mounted for accurate alignment. The abrasive cloth will average from 500 to 1,200 bobbins before it must be changed. In order to present a new sanding surface on the abrasive cloth, all that is necessary is to loosen eccentric paper clamps, pull down abrasive cloth 3½ inches and cut off worn portion. Abrasive cloth is carried in rolls on cross bars. Brushes and pads act only as pressure fingers and, therefore, have considerable life.

Keller Tool Co. Adds One-Ton Hoist To Line

A bulletin published by Keller Tool Co., Grand Haven, Mich., announces the production of a one-ton capacity Air Hoist, known as Model 86-2V20, as shown.



It is compact, ruggedly built, and is described as embodying the same exclusive construction features of Keller 500- and 1,000-pound hoists. These features include variable speeds which give the operator full control of positioning, lowering, or raising the load at any desired speed from creep to 17 feet per minute. Standard length of lift is eight feet.

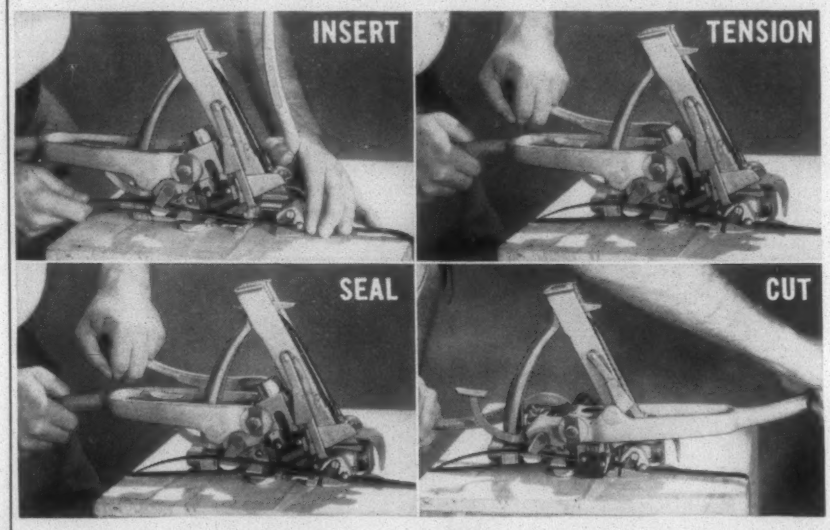
Built-in safety features include safety stops, high-grade alloy steel roller chains, drop forged swivel hooks. Power is furnished by specially designed vertical piston type air motor. Although the new hoist's lifting capacity is a ton, its weight is only 75 pounds, making installation an easy job.

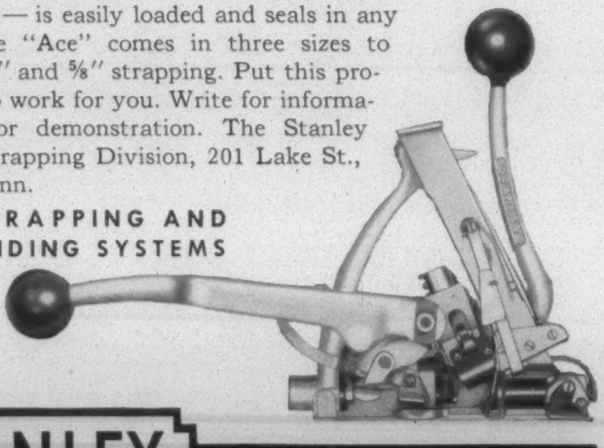
Tide Water Is Expanding Facilities In Charlotte

With the leasing of a warehouse at 1017 South Boulevard, Charlotte, N. C., that provides 50 per cent more space than their original quarters in that city, Tide Water Associated Oil Co. has begun an extensive expansion program in the South, which will later include the addition of three sales representatives who will be located in Greenville, S. C., Greensboro, N. C., and Richmond, Va. Kenneth M. Slocum, Southeastern sales manager of the industrial products division, with headquarters in Charlotte, states that the expansion is the result of the company's recognition of the growing importance of the Southern textile industry as a market for their products.

Package Strapping Tool Theme Of Gerrard Folder

The Apex of Packaging Simplicity is the title of a new four-page two-color folder issued by Gerrard Steel Strapping Co., Chicago. Parcel post and light express shipments are the main object of the Gerrard





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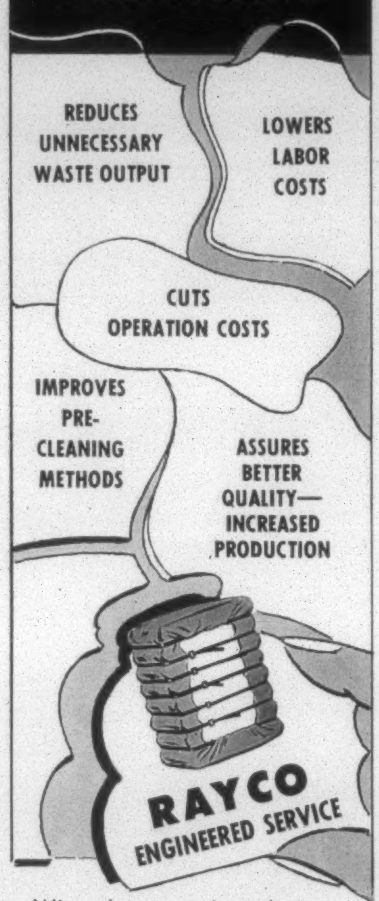
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TA Model round steel strapping tool and the bright coppered round steel strapping that reinforces them. Individual packages and unit-bundles are reinforced equally well by this small hand-size machine. The strapping not only reinforces the packages and bundles but makes them rigid and pilferproof. Packages thus strapped are acceptable by U. S. mails. Simplicity is not a catchword in this instance as the brilliant coppered steel strap is applied by one easy forward and backward stroke of the tool's operating handle. In many plants girls and women operate this tiny machine, with a minimum of fuss and bother since the round strapping itself makes its own tight seal and requires no additional seals or crimping. Write Gerrard Steel Strapping Co., 2915 West 47th Street, Chicago 32, Ill., on your letterhead for copy of this folder.

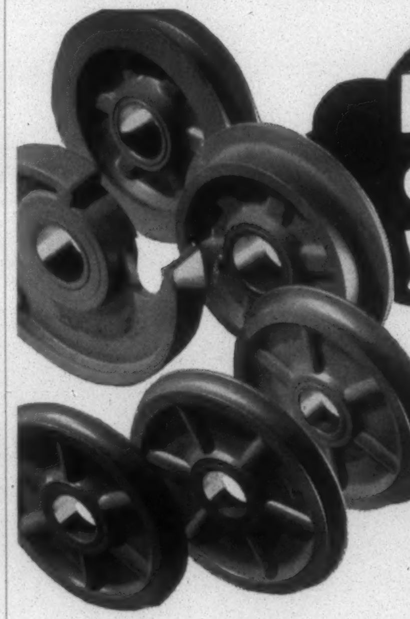
S. A. Sokoloff Forms Own Textile Consulting Firm

Stanley A. Sokoloff, textile consultant, has formed his own textile consulting firm at 475 Fifth Avenue, New York City. With a technical background extending for 15 years, he offers services in fabric development, production, and quality control, to the manufacturer and converter. He will also give counsel to outside interests on textile matters. Mr. Sokoloff has been directly associated with the fabric manufacturing industry where he has been identified with the St. George Textile Corp., Max Sokoloff & Co., and others. During the war he held an appointment in Washington as materials engineer in textiles with the U. S. Maritime Commission. In addition to his regular work, Mr. Sokoloff has been instructor of textile technology in the graduate school of the U. S. Department of Agriculture, and is now on the staff of the school of retailing, New York University, where he conducts an advanced evening course in fabrics.

United States Testing Co. Releases 1948 Price List

The United States Testing Co., 1415 Park Avenue, Hoboken, N. J., recently announced the release of its 1948 price list. This new edition lists over 1,200 tests beginning with abrasion, acoustics, adhesion, and ending with X-ray, yardage and yarn tests. The price list is tabulated under the headings: acoustics, air conditioning and refrigeration tests, air filter tests, bacteriological tests, chemical tests, engineering tets, food tests, heating and ventilating, leather tests, optics, plastic tests, precision measurements, textile tests such as braids, cord and twines, fabric tests, wool fiber tests, yarn tests and specialized services.

In the 1948 price list, the basic test charges remain unchanged. In some cases increases have been found necessary and in other instances reductions based on volume testing have been made where testing equipment is kept operating at full capacity. An example of this is the weather-ometer. This test apparatus accelerates outdoor weathering conditions. Samples are exposed to car-



Is Down Time a pain in your neck?

Thousands of RunRite Plastic Sheaves have been running continuously, in many plants, for over six years, and still going perfectly. Under similar conditions they should do equally as well for you. Figure your savings in reduced down time alone. Then, bear in mind, that RunRites' smooth, perfectly balanced strap surface means longer life to harness straps. Once installed, they need no further attention for years of dependable service.

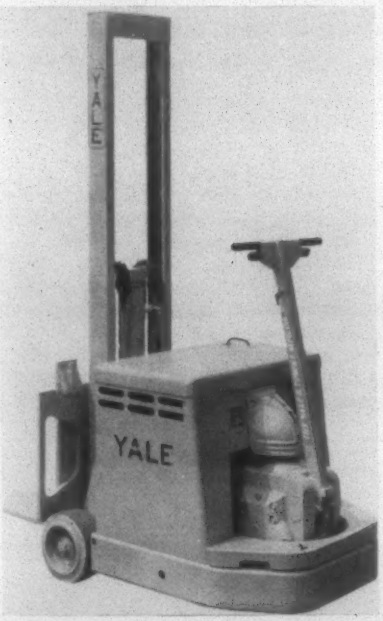
RUNRITE TRADE MARK *Plastic Sheaves*
NATIONAL PLASTICS, INC. KNOXVILLE 2, TENN.

REPRESENTATIVES
EMMONS LOOM HARNESS CO., Lawrence, Mass.
WATSON & DESMOND CO., Charlotte, N. C.
HENRY H. HERSEY, Greenville, S. C.
HARRIS MANUFACTURING CO., Atlanta, Ga.

bon arc light simulating sunlight and receive perdiodic cycles of water spraying, simulating rain. The new prices for weather-ometer tests are as follows: Fabrics—single arc, per sample, per hour, ten cents; double arc, per sample, per hour, 20 cents. Paints and plastics—single arc, per sample, per hour, eight cents; double arc, per sample, per hour, 16 cents. Copies of the 1948 price list are available upon request.

Non-Tilting Fork Worksaver Offered By Yale & Towne

The seventh in its line of battery-powered, handle-guided hand trucks, has been announced by the materials handling division of the Yale & Towne Mfg. Co. The new Worksaver model is a non-tilting electric fork "walkie," available in 1,000 and 1,500-pound capacities. This model was designed for handling loads that are not heavy enough to require the tilting feature of the 3,700-pound capacity Tilting Fork Worksaver. It is recommended for use in textile mills and in other applications where loads are comparatively bulky, but not comparatively heavy.



The three main features of the non-tilting fork Worksaver are: (1) low cost, due to simpler mast construction, (2) short turning radius, and hence greater maneuverability in congested areas and narrow aisles, and (3) light weight, making the Worksaver desirable where it must ride elevators. Other features include ten by five-inch tires, 24- to 42-inch forks, improved commutation drive motor, series wound high torque hoist motor, and Yale orange safety paint. Write for Bulletin P1035, Yale & Towne Mfg. Co., 4530 Tycony Street, Philadelphia 24, Pa.

Spinelli Co. Offers New Cloth Positioning Machine

Spinelli Machine Co., 28-30 22nd Avenue, Paterson 3, N. J., is currently offering to the industry a new lightweight, yet ruggedly built production tool which it claims enables the correct positioning of material

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PRODUCTS of unsurpassed quality and performance, plus an experienced knowledge that knows how to recommend their use for practical results—is convincing more mills, day by day, that NORTH is the place to turn for service and supply when changing conditions require new and highly specialized products to meet the problem at hand. Our men are trained in practice; not in theory. Our products pass the same exacting test.

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rapidly and better than heretofore. The cloth positioning machine enables the laying of silk tie and dress goods (or other similar materials) preparatory to the printing operation in a perfectly straight and even manner, without troublesome wrinkles, the company states.

It also is said to eliminate the slow, tedious and expensive hand pinning of the material, thereby eliminating the always present danger of the screen loosening the pins and causing a misregister. The machine's light weight is due to its all aluminum construction. All moving parts centered on precision ball bearings. It has adjustable back and forth tension bar; two precision made aluminum positioning rollers, self-adjusting roller guide rail device. This machine will enable the manufacturer to do a quicker, better job; cut down, if not eliminate entirely, rejects due to positioning misregisters and thereby cut costs in these days of ever rising costs.

Du Pont Booklet Themes Nylon Fibers In Industry

Nylon Textile Fibers in Industry is the title of a new 30-page booklet being offered by the Nylon Division of E. I. du Pont de Nemours & Co. Industrial uses of nylon enumerated in the booklet include applications in the automotive field, such as car, truck and bus tires; marine applications, and uses in the laundry industry. Aircraft applications include tire cord, wing covers, de-cicers, collapsible fuel cells and windsocks. Trolley cords, ship salvage balloons and lobster pot head twine are among the unusual uses listed in the booklet.

Sections are devoted to nylon's properties of strength, light weight, toughness and abrasion resistance, elasticity, low moisture absorption, heat setting, resistance to light, chemical, heat; and attack by mildew, mold and insects; non-flammability, and non-toxicity. The booklet is available by writing to the Nylon Division, E. I. du Pont de Nemours & Co., Wilmington 98, Del.

Brown Bulletin Describes Size Level Control System

The Brown Instrument Co., Philadelphia 44, Pa., a division of Minneapolis-Honeywell Regulator Co., recently issued to the industry its Bulletin 8.1-1 giving a detailed description of its Brown Size Level Control System. Fluctuation in the level of the sizing solution, a contributing factor to defective warps, is eliminated upon installation of this system, the company states, adding that this means another step toward higher weave room efficiency and lower costs.

Brand Names Dictionary For Textile Industry

Textile Brand Names Dictionary (380 pages, $6, cloth bound), published by Textile Book Publishers, Inc., 303 Fifth Avenue, New York City, is an authoritative listing of more than 4,000 fiber, yarn and cloth brand names and their trade-marks. The main portion of the book is the alphabetical listing of the names, with their serial numbers, dates of claim, the product or products which they represent, and the company-owners. In each case the trade-mark appears beside the name for ready reference.

Part II is a unique classified section. Here the brand names are re-grouped under 12 main textile headings: coated fabrics, cotton goods, knits and laces, linen goods, nylon, pile fabrics, rayons, ribbons and elastics, silks, synthetics, wool and worsted goods, yarns and threads. Part III is an alphabetical list of the companies in whose name the registration was made, together with the page numbers on which their brand names appear in the main section.

The book offers a valuable and desirable record of the industry's brand names for mills, manufacturers, converters, buying offices, and the retailers of textile garments and products. For identifying a name or choosing a new one, textile men and patent attorneys will welcome this handy dictionary. For the ready identification of fabrics together with their company-owners, all textile men including the retail salesman will find in this dictionary the quick answer to many of his searches and queries.

New Lubronze Bearing Introduced By Dixon

Dixon Lubricating Saddle Co. of Bristol, R. I., announces Lubronze, an improvement in Dixon lubricating saddles for short draft spinning. It is a bronze insertion, impregnated with graphite, oil and other materials, fixed in the saddle at the point where the latter bears on the front roll. Here, where friction causes the greatest wear, Lubronze provides a smooth bearing surface and gives the extra protection of reserve lubrication. With its special reserve qualities, Lubronze will not eliminate the need for lubrication, but will take over the oiling job when unavoidable delays occur. Inquiries concerning Lubronze should be directed to Lubronze Division, Dixon Lubricating Saddle Co., Bristol, R. I.

Raytheon Introduces New Precipitator Washer

At the eighth Annual Heating and Ventilating Exposition, held at Grand Central Palace, New York City, Feb. 2-6, Raytheon Mfg. Co. of Waltham, Mass., exhibited all models of its electrostatic precipitators. Shown for the first time was Raytheon's new fully automatic precipitator washing unit, used on industrial precipitators. It automatically washes and dries all ionizers and collector plates, re-applies the adhesive and shuts off automatically. Manual cleaning is entirely eliminated. All that is necessary is to press a button and the cleaning is automatically accomplished without interruption of service.

Method For Determining Solubility Of Dyes

The greater use of continuous dyeing methods and changes in the design of dyeing machinery have increased the need for reliable data on the solubility of dyes. The rate of solution, the solubility and methods of increasing the solubility of dyes are of interest in most fields of dye application. Since the conditions of application in these fields are so varied, there is neither a single method of solubility determination nor a single set of solubility data which can be applied in all cases. It is, therefore, important for one to have an understanding of the theoretical aspects of solubility not only in the determination of solubility, but also in the use of solubility data. The new Calco Technical Bulletin No. 801, *Determination of the Solubility of Dyes*, describes a method which can be used to obtain the solubility of commercial dyes. The solubility of a large number of Calco's acid and direct dyes at 60° C. is listed.

Gastonia Firm Develops New Type Furnisher Brush

Development of a new type furnisher brush, used in textile printing machinery and said to possess many advantages over similar items currently in use, was reported last month by J. T. Harrell, manager, and Roy Harwell, foreman, of the Gastonia (N. C.) Brush Co. First model of the new brush is scheduled to be installed at the Rock Hill (S. C.) Printing & Finishing Co. The brush, 48 inches in length, is made of 24 two-inch aluminum cores, which are joined together on the roll by interlocking sockets, and with all-nylon bristles. This permits the individual units to be removed when the bristles become worn. The units then can be returned to the Gastonia firm for refilling.

Another advantage is that the brush may be removed from the machine and each core may be thoroughly washed. Previously operators have been unable to satisfactorily clean the old-type brush, which was made in a single section and thereby difficult to wash. By using the new brush, finishing plants will be able to keep a supply of cores on hand and replace wornout units, the designers explained. A wide variety of brushes for the textile industry are manufactured by the Gastonia Brush Co., which has been in operation for 24 years.

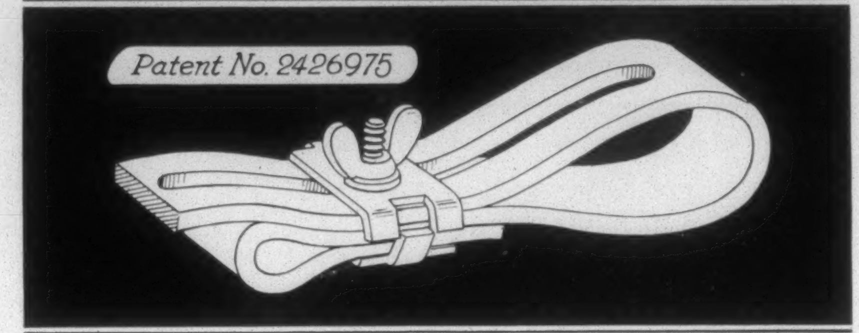
Manhattan Rubber Has New Condensed Catalog

Printing of the sixth edition of *Manhattan Rubber Products for Industry*, a condensed catalog of mechanical rubber goods, has been completed by the Manhattan Rubber Division, Raybestos - Manhattan, Inc., Passaic, N. J. Copies are available on request. Described in this catalog are many mechanical rubber products and special items manufactured by Manhattan Rubber. Particular emphasis is given transmission and conveyor belting, V-belts, hose, enginered molded products rubber roll coverings, tank linings, and abrasive wheels.

New Southern Alkali Plant Nears Capacity

Newest addition to the expanding chemical industry in the booming Southwest, Southern Alkali Corp.'s large liquid chlorine and caustic soda producing plant at Lake Charles, La., is scheduled to reach capacity production this month, according to an announcement by Harold F. Pitcairn,

NEW JACK STRAP



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Production efficiency hits a new high with this new, accurate jack strap. The patented combination permits absolute accuracy in adjustments down to 1/64"—and then protects that adjustment against vibration with an iron grip.

Put this efficiency expert to work for you today. You will save time, money, labor. Thoroughly tested & approved by leading mills. Write, wire or phone for further details.

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president. Constructed by the government during the war years to produce critically scarce magnesium metal, the plant had undergone an extensive remodeling program during the past 20 months. Southern Alkali is operating the Louisiana plant under a leasing arrangement with the War Assets Administration. Located approximately eight miles west of Lake Charles, the plant is situated on the Calcasieu River. In addition to regular shipment by tank cars, extensive docking facilities permit shipment from the plant by large, specially constructed barges.

Booklet Outlines Program For Plant Fire-Safety

The essential points for management to have in mind in planning or supervising plant fire-safety are outlined in a 16-page illustrated booklet recently published by the Associated Factory Mutual Fire Insurance Companies. The information originally appeared as a series of 12 articles during 1947, under the title "What Makes a Plant Fire-Safe?" Each page deals with a separate feature of the over-all problem. The broad principles governing construction standards, automatic sprinklers, water supplies, and extinguishers are covered, as well as the essential requirements of a good watch service and fire-fighting organization. Included is a breakdown of industrial fire causes and suggestions for their elimination. Good housekeeping, maintenance of fire equipment and electrical apparatus, and safeguards for special hazards are also covered. A copy of the booklet may be obtained by writing the Inspection Department, 184 High Street, Boston 10, Mass.

American Key Products Handling Potato Starch

American Key Products, Inc., 15 Park Row, New York City, announces that the recently completed potato starch plant, owned by the Idaho Potato Growers, Inc., Idaho Falls, Idaho, has made a successful initial run, producing several cars of high-grade starch. American Key Products has been appointed distributor. The plant has a productive capacity of about 20 tons per day, but due to lack of raw materials no regular operation will be possible during the remainder of the current season. The same producer also operates a large dehydration unit at Idaho Falls.

Yale Catalogs Complete Line Of Worksavers

Yale & Towne announces a new three-color, 30-page bulletin on its complete line of Worksaver electric trucks. Worksaver trucks (Yale's line of "walkies") are battery-powered hand trucks which combine the light weight and maneuverability features of the hand truck with the electric-lift and electric-motivation features of the ridden truck. They are particularly desirable where loads up to 6,000 pounds are to be transported through narrow aisles or across comparatively weak floors, areaways, or bridges. Light weight and small size are also advantageous when loads are to be carried in elevators and when it is desirable for the truck to enter street trucks and freight cars during shipping and receiving operations. The bulletin first describes and illustrates in detail the operating mechanisms which are basic to all the different Worksaver types. Each of the seven types of Worksavers are then described and illustrated in detail. Recommended uses, capacity, weight, battery characteristics, speeds, dimensions, electrical characteristics, mechanical characteristics and general characteristics are given for each type of Worksaver. The seven types thus catalogued are: (1) the tilting-fork truck, (2) the non-tilting fork truck, (3) the low-lift pallet truck, (4) the low-lift platform truck, (5) the high-lift platform truck, (6) the electric tractor, and (7) the electric tinplate truck. Different types of rectifiers and motor generator chargers for charging both lead or Edison batteries are next described in the catalog. Application photographs showing the various types of Worksavers being used for such jobs as handling cinder block, paper, steel, skid-bins, pallet-bins, crates, cores, rubber, etc., complete the catalog. The new catalog may be obtained by writing Yale & Towne Mfg. Co., 4530 Tacony Street, Philadelphia 24, Pa., and asking for Bulletin P809.

Water Soluble Oils Available Commercially

A recent development that has been translated to commercial production now makes available in commercial quantities a number of chemical esters, of an oily character, that dissolve clearly in water. Chemically these products are polyoxyethylene oleates and laurates having a molecular weight above 800. They are non-ionic, non-toxic, light in color and fluid or grease-like in consistency. They dissolve clearly in water, alcohol, esters, hydrocarbons and vegetable oils. At 20° C. they are slightly heavier than water. They all have high boiling points and exhibit surface-active properties. The above properties indicate their use as special detergents in textile and fiber processing. They are produced and sold under the names of Polyethylene Glycol Mono Oleates (S1005) and (S1010) and Polyethylene Glycol Mono Laurate (S1019) by the Glyco Products Co., Inc., Brooklyn, N. Y., from whom samples and a specification sheet are available.

New Booklet Explains Loans On Inventory

Lawrence Warehouse Co., nationwide field warehousing operator with offices in 25 cities from coast to coast, has recently prepared for distribution, a 32-page booklet, *Borrowing on Inventory to Finance Your Business*. Although the method of financing inventories, known as "field warehousing," is standard banking practice in all parts of the country, its great usefulness and versatility is not as widely understood by businessmen as is deserved. Field warehousing is a means of controlling inventory on a borrower's premises in order to make it available as collateral for a secured line of credit from a bank or other lending agency. It enables a firm to obtain a needed loan when it has already borrowed up to its legal limit on an unsecured basis. Field warehousing thus takes up where open credit leaves off. That it is a workable, economical credit implement is proved by the fact that many

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You modernize—and economize—with these improved KNOTWOOD Metal Feed Aprons. Every single feature of this precision equipment has been designed for one thing alone—continuous, profitable production. For instance:

KNOTWOOD APRONS DO NOT LOAD UP BECAUSE THE COLD-ROLLED POLISHED STEEL SPIKES WITH EYELETS ARE SOLIDLY RIVETED FOR CONSTANT ANGLE AND TENSION

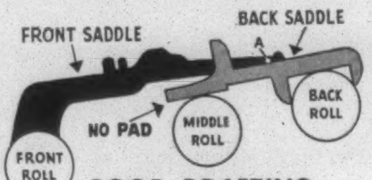
The new KNOTWOOD Aprons have been thoroughly tested and approved by leading mills. Their smooth, positive drive, simple, efficient construction and long life mean more and better production at less cost.

Built, installed and serviced in our Charlotte plant and offices.

Southern Knotwood Apron Company
118½ West Fourth Street
Charlotte 1 North Carolina

GEORGE A. FIELD, Manager

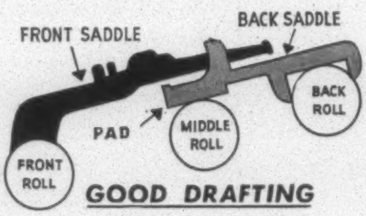
Saddles out of parallel cause this



POOR DRAFTING

If your saddle bearings are thrown out of parallel due to a middle roll of smaller diameter, the resultant ineffective weighting causes poor drafting. Grinding the front saddle to prevent contact at point "A" is not the solution. Saddles are still out of parallel and the locking feature which keeps front and back saddles together is destroyed. When this happens the back saddle is frequently separated and misplaced.

DIXON Insures GOOD DRAFTING With the Saddle for Every Requirement



GOOD DRAFTING

To correct troubles arising from changes in roll diameters, DIXON has a line of back saddles with pads in assorted sizes for the middle roll bearings. These padded bearings, as shown above, solve the problem of proper positioning and correct improper weighting of saddles.

When your middle roll diameters are less than other roll diameters, order the DIXON padded back saddles and continue good drafting.

"It Costs So Little and Saves So Much" To Have the Correct Saddle Suited To Your Special Requirements

DIXON LUBRICATING SADDLE CO.
Established 1876
BRISTOL, RHODE ISLAND, U. S. A.

Sole Manufacturers of
DIXON
LUBRICATING SADDLES

thousands of firms are using field warehousing today. The facts on field warehousing, as applied to the textile industry, are clearly explained in the new booklet, with helpful information about borrowing on inventory (raw materials, semi-finished goods and/or finished products) to provide more working capital. A copy may be obtained by writing Lawrence Warehouse Co., 915 Liberty Life Building, Charlotte, N. C.

New Concern Organized For Sheet Metal Work

Beveridge Metal Products, Inc., has been organized and now is operating at 1336 West Second Street, Gastonia, N. C., according to an announcement by H. G. Beveridge, president and treasurer. Mr. Beveridge is the owner of H. Beveridge Co., formerly Beveridge Reneedling Co. John Rogers, who has ten years' experience in spinning cylinder and textile sheet metal work, is vice-president and general manager of Beveridge Metal Products. The new concern is staffed with a group of experienced workers and equipped with the latest machinery.

Brown Develops New Size Level Assembly

An improved electrode and mounting head assembly for size level applications has been developed by the Brown Instrument Division of Minneapolis-Honeywell Regulator Co. The new assembly, according to a Brown announcement, will decrease maintenance, service and installation problems. The outstanding features of the new assembly are said by the company to include: (a) prevention of false signals; (b) more reliable electrode height adjustment; (c) easier attachment of the assembly to the rim of a size box; (d) improved operation in wet locations; (e) increased applicability of the assembly with higher-resistance detecting relay devices, and (f) positive electrode alignment during clamping. The new electrode assembly will be available after March 1 on all orders for size level control equipment.

Industrial Maintenance Finishes Color Selector

A new color selector for industrial maintenance finishes has been put out by Oliver Johnson & Co., Inc., Providence, R. I. The selector is of the size approved for filing by purchasing agents, plant superintendents, and other industrial buyers. Featured in the selector are the company's new Rest-I-Form one coat Hi-Hide wall paints, identification paints which meet standard regulations, and machinery, dado and floor enamels. The color selector is available without charge to responsible parties in industrial plants. Address Sales Promotion Department, 169 Richmond Street, Providence, R. I.

Hollister-Moreland Co. Changes Its Name

Hollister-Moreland Co. of Spartanburg, S. C., on Feb. 1 changed its name to Hollister-Moreland Co., Inc., as a result of O. S. Bachelor having joined the firm as vice-president and general manager. R. B. Moreland is president and treasurer of the firm and J. B. Moreland is secretary. The concern will continue to act as distributor for the Merrow Machine Co., Dinsmore Mfg. Co., H. Maimin Co., Inc., Beattie Contour Trimmer, H. B. C. Cloth Spreader, Universal Cutting Tables in the states of North and South Carolina, Tennessee, Georgia and Alabama, in addition to being agent for American Safety Table Co. in North and South Carolina.

Hardaker To Produce New Jacquard Machine

Manufacture of a high-speed jacquard machine of entirely new construction will be started early in March by John T. Hardaker, Inc., in its new Charlotte, N. C., plant, it was revealed Feb. 3. Harold Hardaker of Bradford, England, president of the company, announced plans to produce the machine prior to a formal opening of the plant at 2414 South Boulevard, in Charlotte. Details of the machine will be disclosed later, he said. It is now being tested by one of the company's Carolina customers.

The firm's new building is leased from H. B. Keller and was constructed by Frank H. Conner, Charlotte contractor. It is a one-story structure of brick construction, with floor space trebling the company's former plant. The lot is sufficiently large to provide future expansion, said Mr. Hardaker. He explained that at present the company employs 20 persons, but expects to increase this to 60 by the end of the year.

With headquarters in Bradford, England, the Hardaker firm has operated a United States branch in Charlotte for 20 years. Formerly it has served as an assembly and distributing center for textile machinery made at the home plant in England. In addition to this business, it will now manufacture the new jacquard machines for the fancy weaving industries of this country and South America, Mr. Hardaker stated. At the formal opening of the unit here recently, Mr. Hardaker and R. A. Allerton, plant manager, were on hand to greet customers and friends.

Launch Fiber Testing And Consulting Service

A cotton fiber testing and consulting service has been inaugurated in Mount Gilead, N. C., by Dr. Jerry H. Moore, a cotton technologist at N. C. State College, Raleigh, for the last 17 years. The service is designed to assist cotton mills, cotton merchants, waste dealers and cotton linters, cotton oil mills and paper mills, ginning and textile machinery companies, and cotton breeders. Dr. Moore plans to equip a complete laboratory for fiber testing. In this laboratory tests for fiber strength, length, fineness, drag, neps, foreign matter, etc., will be made on raw cotton, cotton waste, linters, etc. And at a later date, it was explained, some testing will be done on wool and synthetic fibers.

Research and consulting will be made "in my own laboratory offices in connection with tests made or with research projects with mills or any of the cotton trade," Mr. Moore said. The service also will include research on quality control in mills, especially relative to raw stock and processing of cotton, blending of fibers, and analysis.

Dr. Moore took a B.S. degree from Clemson College, Clemson, S. C., an M.S. from N. C. State on a research fellowship, attended Cornell University in 1935-36 for study on his Ph.D. degree and was awarded the Ph.D. from Duke University in 1939. He was an assistant professor at the University of Arkansas in 1925-26 and in charge of all cotton fiber research. He also taught courses in cotton production and marketing, cotton classing, and plant breeding.

He was cotton technologist at N. C. State College from 1926 to 1946, and in 1946-47 was director of fiber research for a textile company. He is the author of many papers on cotton production, fibers, and spinning tests and has developed several practical methods for measuring such fiber properties as "drag," strength, length, weight, and diameter. In co-operation with textile engineers he has run raw cotton through the mills to evaluate the relation of fiber properties to spinning quality and to measure the kind and amount of waste.

Firm Granted Patent On CMC Waste Machine

Carolina Machinery Co., Inc., 1426 East Tenth Street, Charlotte, N. C., was granted Patent No. 2436338 Feb. 17 on its CMC Waste Machine. The patent was applied for June 6, 1947. The machine, the company claims, contains many features which are really new in principle and superior in operation and results, producing a better job more efficiently and more safely than other machines made for the same purpose.

New Buildings Planned By Hardwood Mfg. Co.

Hardwood Mfg. Co. of Greenville, S. C., manufacturer of wooden equipment for textile and other industrial plants, including picker sticks and cloth rolls, received a state corporation charter Feb. 9, with an estimated capital stock of $40,000, and announced plans for construction of new buildings as soon as materials become available. C. L. Huffman, Sr., is president of the firm. The company was established in 1926 when Mr. Huffman began a one-man business in an old warehouse. Almost a year later he was joined by one employee. Through the years, the company grew in buildings to its present two main buildings, four sheds and an office building on the Paris Mountain Road.

Singleton Moves Shops From Texas To Alabama

Russell A. Singleton & Sons of Blanco, Tex., has moved its roller covering and apron shop from Blanco to Maplesville, Ala., and is also opening an office in Columbia, S. C. E. A. Lenoir and T. H. Lenoir will be in charge of the Maplesville plant and Robert Singleton will be in charge of the Columbia office.

General Dyestuff Corp. has recently released the following new circulars for the industry: G-504—Rapidogen Brown IR; G-511—Nylon Resist GDC; and GDC-280—Colloresine HV, MV, LV.

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Rayon Sets Production Peaks In 1947

With all segments of the industry attaining new production peaks for the year, American rayon yarn and staple fiber producers in 1947 achieved an output of 975,100,000 pounds, according to the February issue of the *Rayon Organon,* published by the Textile Economics Bureau, Inc., New York City. This total poundage of rayon, exclusive of non-cellulose base manufactured fibers such as nylon, Vinyon, casein and protein fibers, represented a gain of 14 per cent over 1946 and was the largest output in the history of the industry. The 1947 total output of rayon and non-cellulose base manufactured fibers was in excess of 1,000,000,000 pounds, the *Organon* points out. Rayon output in 1947 included 746,700,000 pounds of filament yarn and 228,400,000 pounds of staple, an increase over the preceding year of ten and 30 per cent, respectively. The largest poundage increase was achieved in viscose process staple (35,500,000 pounds) followed by acetate yarn (35,200,000 pounds) and viscose filament yarn (34,000,000 pounds) and acetate staple (16,500,000 pounds). Percentagewise the sequence differed as acetate staple led with a 38 per cent increase followed by viscose staple at 27 per cent, acetate yarn 19 per cent, and viscose-cupra yarn seven per cent.

The *Organon* estimates global production of rayon yarn and staple in 1947 tentatively at 2,000,000,000 pounds, an increase of 20 per cent over 1946. Of this total, 1,290,000,000 pounds were filament yarn and 710,000,000 pounds staple. The filament yarn output, the *Organon* states is the largest output ever attained. The previous peak was 1,270,000,000 pounds which was reached in 1941. The new record was due to high production levels in many European countries, particularly Belgium, France, Italy, the Netherlands, and the United Kingdom, and to continued expansion of output of both North and South American producers. Although still small by pre-war standards, the production in Japan also showed an increase over 1946. World production of rayon staple in 1947 represented a gain of 25 per cent over the preceding year, but in this category the level of output was considerably below that of pre-war days. It is noted, however, that important increases in staple output were attained by many European producers and by the United States and small increases occurred in other Western Hemisphere countries. On the other hand, Japanese output last year was slightly below the 1946 level. The United States with 49 per cent of world output was by far the largest single producer. Its lead was especially commanding in filament yarn, and in this category it accounted for 58 per cent of the world total. Staple production on the other hand, accounted for 32 per cent of the world output.

Compared with 1946, the domestic production in 1947 of viscose-cupra yarn was higher in all denier categories except for the 125, the 525 to 999, and the 1100 denier yarns. Aggregate output of the 150 denier and finer yarns was eight per cent more than 1946, even though there was a drop of 30 per cent in the output of the 125 denier size. For the volume 150 denier yarn, 1947 production was 15 per cent greater than 1946 and 26 per cent greater than 1945. An increase also occurred in the total output of yarns in the 200 to 999 denier range. Gains in the 300 and 450 denier sizes more than offset the reduced output in the 525

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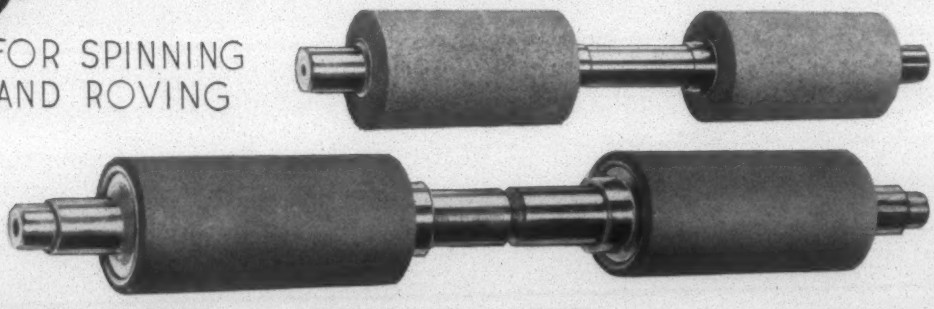

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to 999 denier category. A comparison of 1947 and 1946 production of viscose-cupra yarn by tenacity reveals an increase of 7½ per cent in so-called textile yarns and six per cent gain in high tenacity yarns. The latter type is used principally by tire manufacturers. In 1947, high tenacity yarns were produced only in heavier denier sizes, principally 1100 and coarser, whereas in previous years, finer denier high tenacity yarns, especially the 275 denier size were produced. The average denier of viscose-cupra yarn production in 1947 increased from 220 to 222.

Compared to the previous year, the 1947 output of acetate filament yarn was greater for all denier groups except the 120 denier. Principal poundage gains were in the 75, 150, and 200 and coarser deniers. The 1947 output of 75 and 150 denier yarn was 18 and 27 per cent, respectively, above 1946 levels. On the other hand, the production of 120 denier yarn was 20 per cent below the previous year. The 1947 average denier of acetate yarn production was 99, compared to 96 in the previous year.

Rayon filament yarn shipments in 1947 totaled 729,000,000, a new record, surpassing shipments in 1946 by 9½ per cent and doubling the 1939 figure. A comparison of 1947 viscose-cupra filament yarn shipments to various trades with those in the preceding year show the following percentage changes: fashioned hosiery, minus 73 per cent; circular knitting, plus two per cent; warp knitting, plus 14 per cent; broad weaving, plus nine per cent; narrow weaving, minus six per cent; miscellaneous, plus five per cent; seamless hosiery no change; and total shipments to all textile trades, plus six per cent. On a poundage basis, the greatest reduction (4,400,000 pounds) occurred in shipments to the fashioned hosiery trade, while the largest increase (18,000,000 pounds) went to the broad weaving industry which accounted for 71 per cent of all the viscose-cupra yarn shipped to non-tire trades during 1947.

In the case of acetate filament yarn, percentage changes from the preceding year were as follows: fashioned hosiery, minus 22 per cent; seamless hosiery, plus 12 per cent; circular knitting, plus eight per cent; warp knitting, plus 11 per cent; broad weaving, plus 18 per cent; narrow weav-

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ing, plus 38 per cent; miscellaneous uses, plus 152 per cent; and aggregate shipments to all textile trades, plus 18 per cent. In pounds, the full-fashioned hosiery trade showed a slight loss compared to 1946, but shipments to broad weavers increased by 27,200,000 pounds. Broad weavers received 83 per cent of the 1947 total acetate yarn shipments to domestic trades. Shipments of viscose rayon yarn to tire manufacturers in 1947 were up six per cent and accounted for 44½ per cent of total domestic shipments of viscose-cupra yarn.

Heating, Ventilating Exposition Is Held

At a moment of growing anxiety over fuel supplies in a winter of rare severity, the Air Conditioning Exposition in New York rendered timely aid to a harassed nation by revealing an immense variety of up-to-date heating equipment in good and rapidly improving supply and also disclosing many ways of using fuel more effectively. The exposition was held in Grand Central Palace, New York, and was officially the Eighth International Heating and Ventilating Exposition, under the auspices of the American Society of Heating and Ventilating Engineers, which held its 54th annual meeting during the same period, Feb. 2-6, inclusive. The major effect of the exposition was in revealing the industry's part in the "technological revolution."

Revisions of design and introduction of new features by exhibitors in almost 100 hundred different categories represented in the palace brought a heavy influx of invited visitors from trade, technical, industrial, management and business sources, and rolled up a registration total of 39,172 for the week, with no tickets sold and the general public strictly not admitted.

Reflecting the rapid pace at which the heating and ventilating industry is moving, a surprisingly large proportion of items were viewed for the first time at any exposition. Still further pace-making is forecast by the announcement that the Ninth International Heating and Ventilating Exposition will be held Jan. 24-28, 1949, in Chicago. Of interest was the notable advance in numbers of manufacturers who have broadened their lines to meet all phases of the industry's requirements; also the continuing advance in the use of new structural materials of all kinds; and further emphasis on certain types of heat radiation.

One of the most widely featured displays was that of the "heat pump," which in general implies the application of the refrigerating cycle selectively for both heating and cooling. When operating as a heating medium, a system of this description gives out the heat of compression of the working fluid, and rejects the heat of expansion, just as when cooling it absorbs the heat of expansion and rejects the heat of compression. Because of this fact the general method is often termed reverse refrigeration. The most radical air conditioning system seen at the exposition utilizes the even temperature prevailing below ground as a medium for counter-balancing the varying temperature requirements in both hot and cold weather. This was the first display of its kind in New York.

Innovations in the design of boilers and burners, revealed at the exposition, have multiplied at an astonishing rate. In numerous instances wholly new types are being introduced, while in others improvements of detail are indicated. There has been a marked progression in the direction of smaller units. Ready convertibility from coal to oil firing—and back again, if need be—is emphasized by a number of

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exhibitors, and one manufacturer of warm air furnaces has provided for conversion from gravity to forced circulation without baffling or jacket changes. In addition to the more conventional heating appliances several exhibitors showed packaged steam boilers such as are finding ready acceptance for a wide variety of purposes. These units are sold complete with burners and trim, mounted on channel iron frames, ready to connect up and fire up. They are equipped for full-automatic operation. A complete new series of appliance burner pressure single valve regulators and a new gas burner featuring automatic injection of primary air, freedom from adjustments and silent operation were among other displays.

Air conditioning was featured by a substantial proportion of exhibitors showing boilers and furnaces, as well as by manufacturers specializing in that field. The major interests in this field are the specialists whose principal work is in the protection of industrial plants and the provision of comfort and health safeguards in stores, office buildings, hotels, restaurants, theaters and other public places. Such installations require air circulation, purification, humidification, heating and cooling. These were well represented at the palace. The manufacturers of domestic equipment, on the other hand, have developed compact units which combine heating, cooling, filtration and humidification very effectively. There are also the "winter air conditioners," which heat, filter, humidify and circulate air without providing refrigeration. In a number of instances such units are offered as conversions for gravity furnaces.

Air clarification, by filtration, precipitation and washing, has been progressing steadily in the industrial field for a number of years. Recently, it has made new technical gains, as exemplified in a number of ways at the exposition. Noteworthy is a combination of filtration and electro-static precipitation which is a basically new development, as the two methods involved have been employed independently heretofore. This is achieved through the use of a specially manufactured paper mat which serves as a mechanical filter but at the same time carries an electrostatic charge and therefore attracts electrified dust partticles to its surface while others are being entrained in its interstitces. When it has been loaded to the point where the air flow is seriously obstructed the paper mat is readily removed and discarded.

One of the most varied and comprehensive exhibit classifications was that composed of instruments for the laboratory, for air conditioning applications and for installations and field service. One exhibitor introduced at this exposition complete electronic and photoelectric systems for combustion control, of which the crowning achievement is an all-inclusive system for programming automatic ignition, fuel pump and valve systems on automatic oil and gas burning installations. Another exhibit included steam, air and gas flow meters; meters for measuring flow of liquids; flow nozzles for steam, air or gas; rate of flow indicators, and secondary recording instruments of several kinds. In this collection of instruments is a Flow-Watch for mechanically indicating, totalizing and recording the movement of liquids.

Some cotton mills provide large community greenhouses for employees to store their potted plants and flowers during the winter months.

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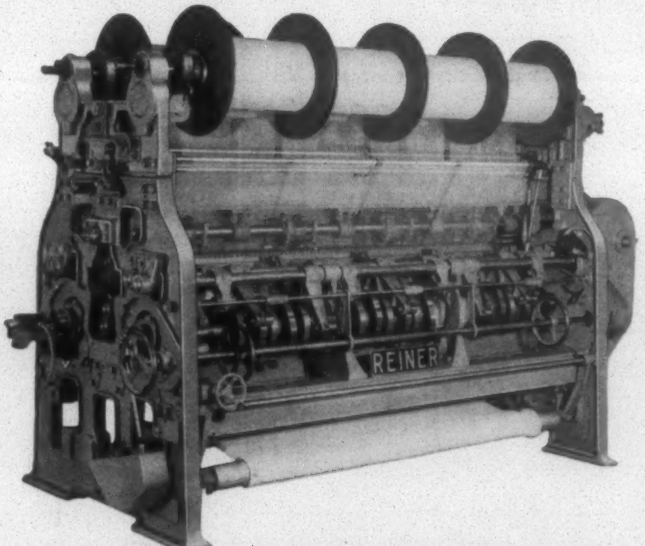
The new Reiner Simplex Machine is ready for your inspection. You are cordially invited to write to us for an appointment.

The Reiner Simplex Machine is of the most modern construction and its features make it the most economical producer of the finest Simplex cloth yet made. It takes spools up to 21 inches in diameter, or any spools of the conventional size. Knitting width 84 inches. Pattern wheel or chain link drive.



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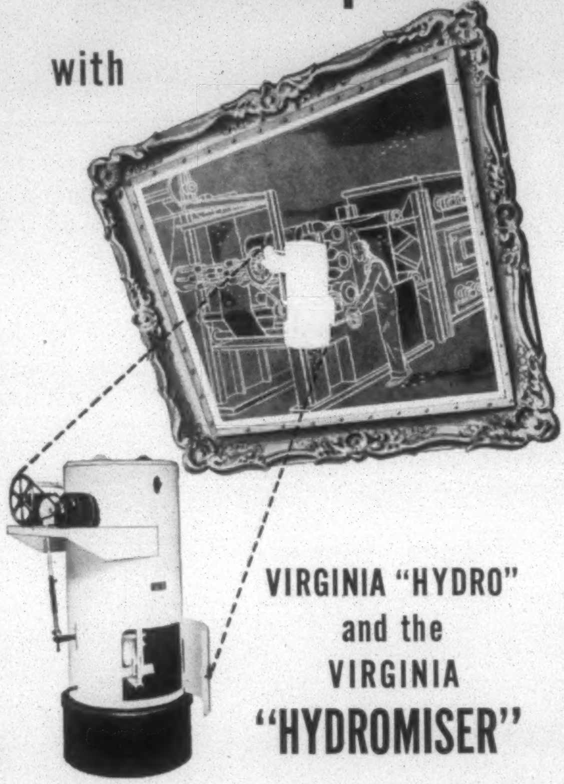

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Westinghouse Offers Maintenance Check Chart

Stating that preventive maintenance can do more to assure continued high output of manufacturers than any other single measure, the technical press of Westinghouse Electric Corp. has prepared and issued to the industry a maintenance check chart for electrical equipment. The chart lists salient points for maintenance inspection in motors, control equipment, lightning arresters, wiring, fuses and transformers.

Machinery and Metals Exposition Slated

The third Southern Machinery and Metals Exposition will be held next April 5-8 at the Municipal Auditorium in Atlanta, Ga. Exhibitors for the 1948 exposition will come from coast to coast, and from the Great Lakes to the Gulf. Many Southern companies, as well as national organizations, will be included. More than half of the space has been reserved by past exhibitors. Requests for exhibit space have already been received from companies who had sent personnel to observe the 1947 exposition. A number of these concerns are located in the South, while others are located in various parts of the country—Oregon to New York.

Manufacturers of machinery and tools; metal products; materials handling equipment; oils and lubricants; welding and safety equipment; ferrous and nonferrous castings and forgings; electronic apparatus; chemicals and detergents will exhibit their products. Lathes, saws, presses, drills and a variety of industrial equipment used in Southern plants will also be shown. Southern industrial personnel attending the exposition will include company executives and plant owners; foremen and supervisors; engineers, metallurgists, inspectors and chemists; purchasing agents, plant managers, technical, skilled and shop personnel. The 1947 Southern Machinery and Metals Exposition was judged eminently successful and has been recognized as a moving force in the development of Southern industrial markets. This exposition has become a focal point in contacting Southern industrial personnel.

Importance Of Reweighing Wool Stressed

Concerning the core testing of grease wool for determination of clean content yield, according to the United States Testing Co., it is becoming increasingly evident that the proper significance of the weight of the wool at the time the core samples are taken may not be thoroughly recognized. R. T. McAndrew of the Boston Wool Laboratory of the United States Testing Co. points out that the result of a yield test when expressed in terms of percentage is merely relative. If the wool is not weighed at the time of coring the result loses its significance. As the moisture content of the wool is subject to considerable variation over a period of time, it is most essential that the wool be weighed at a time when its moisture content is comparable with that of the core samples. Then, and only then, can a yield percentage be correctly applied to determine the theoretical ultimate yield in terms of pounds. When these two points are established it is merely a matter of calculation to obtain a theoretical percentage yield for any weight of this lot at any time in the past or future when the weight difference can be attributed to moisture variations.

This principle is utilized most advantageously when a core test is conducted on a lot of wool which is delivered on the basis of invoice weights taken when the wool was shipped some time previous. The bales or bags are weighed at the time the core samples are taken, compared with the invoice weights of the same bales or bags, and the percentage moisture change is computed. The test result is corrected for moisture change to obtain a yield percentage which can be applied to the original invoice weight. The following example illustrates this application:

Invoice weight	12,000 lbs. net
Reweight at time of test	11,800 lbs. net
Yield test result	60.00%

$$\frac{11{,}800 \times 60.00}{100} = 7080.0 \text{ lbs. yield}$$

The 60 per cent figure can apply only to the reweight of the lot. To determine the yield based on the invoice weight, a proportion is obtained as follows:

$$\frac{60.00 \times 11{,}800}{12{,}000} = 59.00\% \text{ yield}$$

$$\frac{12{,}000 \times 59.00}{100} = 7080.0 \text{ lbs. yield}$$

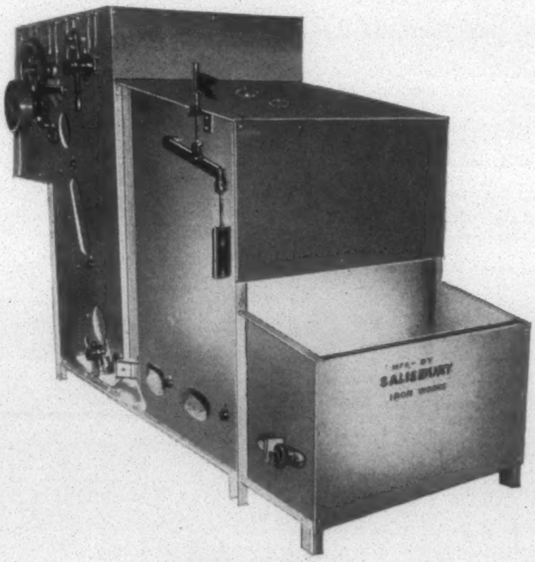
Thus, it can be readily seen that the percentage yield of a lot of wool varies inversely to the moisture content. The actual yield in pounds will, of course, remain unchanged. This necessity for weighing at the time of test cannot be over-emphasized, and should be clearly recognized by anyone handling grease wools.

Production Continues At Peak Levels

Production in the textile industry is at a higher level than in any peacetime year prior to World War II, according to *The Index,* quarterly publication of the New York Trust Co. "Some sources estimate that the textile industry today is a $20-25 billion industry," the article says. "In the war and post-war period, new production peaks were reached in cotton, wool and rayon fabrics. Total consumption of the four raw fibers—cotton, rayon, wool and silk—was about 43 per cent higher in 1946 than in 1939, according to the United States Department of Commerce. In the last quarter of 1946, the annual rate of consumption was estimated at a level about 50 per cent higher than during the corresponding period of 1939. Consumption of cotton in 1946, for example, was about one-third larger than in 1939, and more than 20 per cent above consumption in any pre-war year.

"Per capita consumption of wool in 1946 surpassed even the 1943 wartime peak, although more than half the total consumption in 1943 was accounted for by the military services. Per capita wool consumption in this country in 1946 was about twice that in 1939. One of the chief reasons for this increase was the trend toward use of wool suits by women. Rayon consumption, which had been mounting steadily in the pre-war period, has continued to rise, although the rate of growth for civilian consumption was checked during the war by the effect of priorities. However, rayon today has a competitive advantage since its price has increased relatively less than either cotton or wool prices."

The article says that more than two million workers are



MODEL S BF-1
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Loom Beams

SALISBURY ENCLOSED BLENDING FEEDER

Model S BF-1 Salisbury Enclosed Cotton Blendng Feeder is used for the processing of cotton, wool, and synthetics.

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GENERAL SPECIFICATIONS

The Salisbury Enclosed Blending Feeder has a heavy fabricated steel frame which makes it a rugged, durable, and trouble free unit. All gears and chains are covered with guards for safety.

Oilite bronze self-aligning bearings are used throughout, eliminating oil leakage and assuring clean fibres.

Provisions are made for the installation of automatic sprinkler head and vacuum lines. All usable waste fibres may be reclaimed from waste container.

Salisbury Blending Feeders are designed to allow installation of kick-off roll or combing attachment.

The machine may be used in a blending line or in combination with a picker.

This model is provided with ample storage space. This facilitates better blending of various fibres and requires less attention from the operator.

Model S BF-1 as shown is equipped with a lower or front apron which extends outside the storage chamber of the machine and has a small bin into which the raw material is placed by the operator. It is then carried into the storage chamber on the conveyor apron. This model also has a combing attachment as standard equipment.

This machine is manufactured of the finest material and workmanship and has proven its worth by satisfactory, trouble free operation.

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employed in the large group of separate industries that make up the textile industry. About 1.2 million are engaged in the production of textile mill products and in the dyeing and finishing industries, while approximately another million people are employed in the needle trades and the manufacture of other goods made from textiles. "Since the textile industry in the United States," the article says, "is already the most efficient in the world, domestic producers who take full advantage of the findings of advanced technological research may be expected to maintain their preferred position in international competition. The industry apparently faces no shortage of cotton and wool, although at the present rate of operations a shortage of rayon may develop. It has improved its fabrics and its production process.

"Undoubtedly there will continue to be intensive competition among different types of textiles and between textiles and substitute products, but it has been estimated that demand for textiles can be maintained over the long term at a level at least 20 per cent higher than the 1935-1939 average, provided production and distribution costs per unit can be lowered and continued improvements made in products and processes. Textile consumption in the United States has a direct relationship to the size of the national income. Maintenance of a high level of industrial production, employment and income, should, therefore, mean continued prosperity for the textile industry."

Launch First National Advertising Campaign

The nylon division of E. I. du Pont de Nemours & Co. launched its first national advertising campaign last month. The series, which will be aimed at consumer, industrial, and trade education, will stress the unusual combination of properties existing in nylon textile fibers and their contribution to the performance and value of finished products. In addition to *Life, Saturday Evening Post, Collier's*, and *Time* magazines in the consumer field, the campaign will be featured in eight textile trade publications and two publications in the industrial field.

Double-page spreads in full color will mark the start in February of the campaign in the consumer field with 36 single pages in full color to follow during the remainder of the year. Follow-up educational material will include consumer and industrial booklets, merchandising bulletins, and a motion picture to be produced later. The nylon campaign will be augmented by Du Pont's series of trade insertions featuring "nylon, rayon, and fibers to come" which was introduced last year. Du Pont, which began the commercial production of nylon yarn at Seaford, Del., in 1939, and opened a second plant at Martinsville, Va., in 1941, is completing a new unit at the Martinsville site and a third plant is under construction at Chattanooga, Tenn.

Wool Research Project Is Approved

Four U. S. Department of Agriculture research projects having to do with the marketing and processing of three farm products, including wool, have been approved recently under the Research Marketing Act. The Production and Marketing Administration and the Bureau of Agricultural Economics will co-operate in analyzing domestic wool requirements and sources of supply. U. S. requirements for apparel wool have been increasing since 1939, but domestic production has declined. This nation now produces only one-third of its wool requirements, but in pre-war years it was 80 to 90 per cent self-sufficient. It seems essential that the United States produce part of the wool that it needs, but how much is not known. The project will study wool requirements and merchandising, wool sources and government policies as a basis for determining future wool policy. The project, which will have the co-operation of interested agencies, was given top priority by the Wool Advisory Committee at its Washington meeting last July.

German Asbestos Process Described In Report

Practices used by the Germans for obtaining a clean and well opened asbestos spinning stock are described as "unique and most efficient" in a report now on sale by the Office of Technical Services, Department of Commerce. The report was prepared by Gerd M. Bloomfield, superintendent, Union Asbestos and Rubber Co., Cicero, Ill., following an investigation of the German asbestos industry under O. T. S. sponsorship. The process, as used by the Frankfurter Asbestwerke, at Frankfurt, involves loosening up the raw asbestos in a crushing roller mill. The mill has wide conical rollers unlike conventional chaser mills with cylindrical rollers. The conical feature eliminates undesirable friction between the rollers and the trough, and the rollers are built larger and heavier, resulting in faster production and smoother handling of the fiber. After loosening, the raw asbestos is sent through a vertical opener, and thence to a screening drum where impurities are eliminated. The screening is especially important in preparing high-grade asbestos large inclined drum with a bottom of exchangeable sheet metal sieves having openings varying from one-eighth to one-third of an inch. Spiral beater arms beat the material thoroughly while transporting it across the sieves to the end of the drum. After screening, the various grades of raw asbestos are blended into spinning stock or mixed with reclaimed waste or other fibers.

According to the report, "The screening of the asbestos provides the mill with grades of fiber which comply with the needs of production and quality required. First, a long fiber clean and of highest grade is obtained. Secondly, from the screened out waste fiber mixed with other waste from the mill and screened on a smaller sieve, a shorter spinning fiber is obtained, and the producer is able to determine how high a percentage of this shorter fiber he can allow in the various mixes and use the remainder in other products. Thus, he is fairly sure to have a uniform stock, notwithstanding unavoidable variation of the raw material as it comes from the mines. Thirdly, most of the undesirable impurities and dust are eliminated." Further details and a schematic drawing of the process are contained in the report. Other developments in the German asbestos industry found of interest to the investigator include a carding machine for processing short asbestos fiber, high-speed braider machines, methods for recovering volatile solvents, elaborate precautions taken to prevent dust and protect workers against silicosis in German plants, and the develop-

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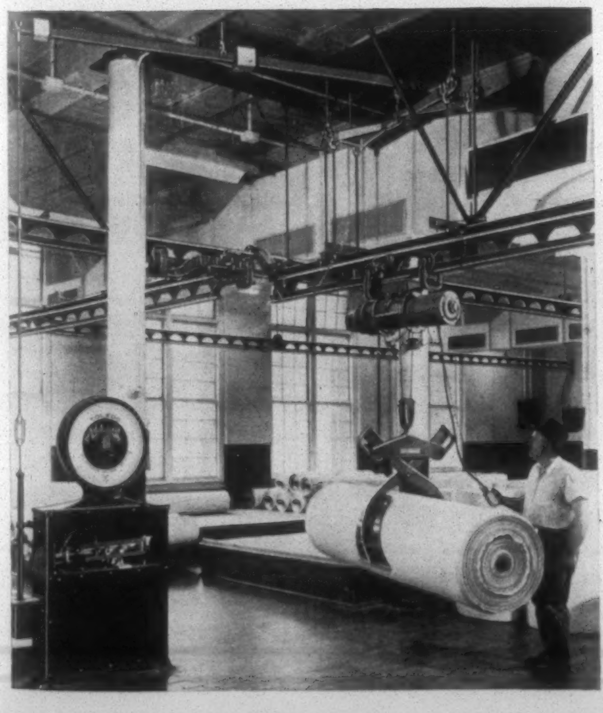

CLEVELAND TRAMRAIL FOR OVERHEAD HANDLING

Left—Cloth rolls handled on interlocking Cranes and weighed quickly on track scales

Below—Selective beam storage with Tramrail Crane

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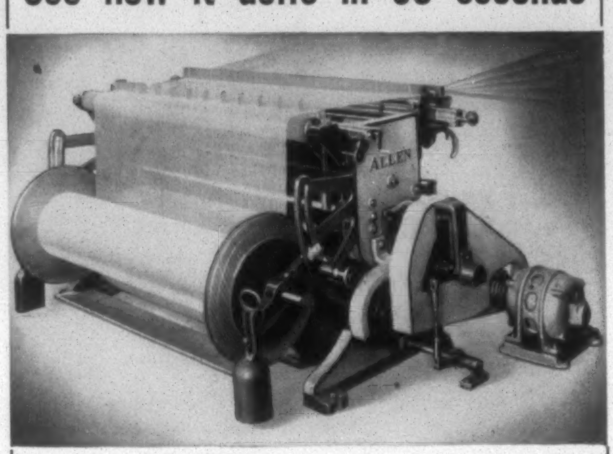
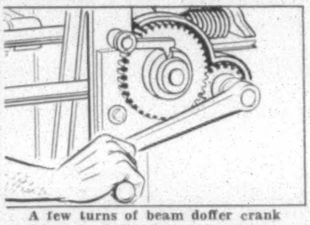
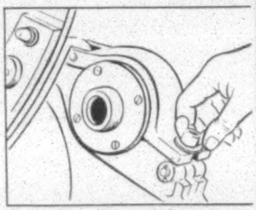
Rayon Warper MODEL "R"
See how it doffs in 30 seconds





A few turns of beam doffer crank depresses ball bearing beam arm and lowers beam to floor.



Releasing wing nut frees beam by permitting ball bearing to slip off shaft ends.

1. Speeds up to 350 yards per minute.
2. Electric stop motion.
3. Beam doffing device.
4. Adaptable for use with any make Cone Creel.
5. All adjustments made on outside of warper.
6. Predetermined Veeder-Root Yardage Counter and Measuring Roll.
7. Expansion Combs made with hard chromium-plated dents.
8. Vibrator Motion for ends at Back Comb, to eliminate wearing of dents.
9. Efficient braking devise.
10. End and End Leesing Devise if desired.
11. Motor and V-Belt Drive.
12. Silent Chain and Sprockets in place of gears.
13. Ball bearings throughout.
14. Bearings equipped with Alemite fittings.

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made on Good Beams"

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XXRXRHT Rayon Warper for warping viscose rayon yarn of 50-1100 denier, specially reinforced for this work. HC Warper Beams for acetate and Nylon. Extra heavy reinforcements to stand pressure of these yarns.

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ment of a synthetic asbestos. The report (PB-78290, *Technical and scientific developments related to the asbestos industry in Germany)* contains photographs and diagrams of machinery considered of particular interest by the investigator. The 48-page mimeographed report sells for $1.25. Orders should be addressed to the Office of Technical Services, Department of Commerce, Washington 25, D. C., and should be accompanied by check or money order, payable to the Treasurer of the United States.

German Woolen Processes Described In Report

A compresensive 185-page report on German manufacturing practices and research developments concerning woolen and worsted military items is now on sale by the Office of Technical Services, Department of Commerce. The report, prepared by Werner von Bergen for the Quartermaster Corps, is a compilation of all data collected from the Germans pertaining to woolen items of military significance. German army standard uniform cloth, army blankets, army socks, aviation underwear and winter boot felt and other pressed felts used for military purposes are analyzed and their specifications, fiber content, and construction as well as details of the manufacturing techniques employed are discussed.

The combination of woolen and worsted cloth used for the German standard uniform cloth insured a large production capacity since the work could be divided between woolen and worsted spinners. The outstanding deviation from usual manufacturing procedures was found in the spinning of the worsted yarns. Short cuts in drawing, using only four to five passages for the wool-rayon blends, and the high draft ring spinning system, such as Casablanca, were used. A new woolen spinning frame made by Gessner in Aue-Saxony and considered to have some features worthy of interest to American textile machine manufacturers is described. Use of vat dyes for virgin or new wool was specified, but vat or chrome colors were permitted for wool waste and reworked wools. The rayon staple portion of the fabric could be dyed with either vat or sulfur dyes or dyed directly in the spinning solution. The infra red sensitivity of all dyes used was studied and pure indigo was found to be most sensitive. The German war blankets were of such a low grade that they were not considered to be of military value. value. However, German blanket manufacturers able to produce unusually good looking blankets from low-grade materials, according to the investigators.

A tube sorting machine used by one blanket manufacturer, Wolldeckenfabric, Zieppritz, was considered of special interest. It separated broken and good tubes, and neatly arranged them in a box. For army socks the Germans found coarser wool more suitable for the foot because of less felting, and finer wool more comfortable for the leg. The wool was chemically treated by the wet chlorination process to reduce shrinking and felting during wear and washing. Later research on the problems of felting and shrinking revealed that an addition of 15 to 20 per cent acetate staple reduced the felting to such a degree that chlorination was no longer necessary. Specifications were changed in 1943 to reflect this finding. Tests also showed that additions of German nylon staple to the blend increased wear. The felt industry used a large amount of Tiolan, a casein fiber, but it was considered a poor substitute for wool and of no interest when wool is plentiful. The fiber mixture of the winter boot felt, one of the most important army felts, consisted of 35 per cent fleece wool, 25 per cent noils, 30 per cent woolen waste and ten per cent casein fiber. Aviation underwear containing 40 per cent Angora rabbit hair, 30 per cent wool (A/AA 70's French type) and 30 per cent spun rayon (B type) was considered by the investigators to be the best product of its kind produced for army purposes. Specifications are included in the report. Processes for production of enzymes for use in pulling wool; wool scouring and wool grease recovery; dyeing and finishing of woolens and worsteds; and prevention of felting in wool yarns are described. Mimeographed copies of the report, PB-85438—(*The German Woolen and Worsted Industry in World War II;* Quartermaster Corps Textile Series, Report No. 30; 186 pages) sell for $5. Orders should be addressed to the Office of Technical Services, Department of Commerce, Washington 25, D. C., and should be accompanied by check or money order payable to the Treasurer of the United States.

Film Shows Conversion Of Straw To Rayon

A technical film depicting the large-scale conversion of straw to viscose rayon in the most modern of German rayon plants, the Phrix plant at Wittenberge, was shown at the Department of Commerce auditorium, Washington, D. C., Jan. 13. "This film, originally used in Germany for showing in technical schools, will prove of particular interest to rayon engineers in this country," Mr. Green said. "The Wittenberge plant, built in 1938, represents the height of German technology in the field of rayon textiles."

Copies of the film, entitled, "Birth of a Rayon Staple Fiber Plant," (PB-67563) are available for purchase from the Textile Research Institute, 10 East 40th Street, New York, N. Y. The film is one of the few technical films brought to this country as a result of O. T. S. investigation of German technology, it was explained. Oscar Von Kohorn and Joseph L. Costa, O. T. S. representatives who investigated the German rayon industry, obtained the film. The English titles which accompany the 16 mm. silent film were prepared and inserted by Oscar Kohorn & Co., Ltd., of New York, N. Y. A German sound tract was included as a part of the original film.

Reports Describe German Processes

A comprehensive account of cuprammonium rayon production, development of a machine for continuous spinning of rayon from solution to bobbin, copper and ammonia recovery, and cellulose acetate development work at the I. G. Farbenindustrie Dormagen plant is contained in seven reports now on sale by the Office of Technical Services, Department of Commerce, Washington, D. C. The report on cuprammonium rayon production was prepared by personnel of the Chemical Warfare Service of the United States Army. The continuous spinning of cuprammonium rayon is described in a British Intelligence Objectives Sub-Committee report. Five of the reports are translations of I. G. Farben documents explaining various developments at the Dormagen plant during the war.

Processes developed at Dormagen made possible the recovery of 93 per cent of the copper and 75 per cent of the ammonia used in the production of rayon by the cuprammonium process. Resulting savings brought these rayons within competitive range of viscose rayon, according to the

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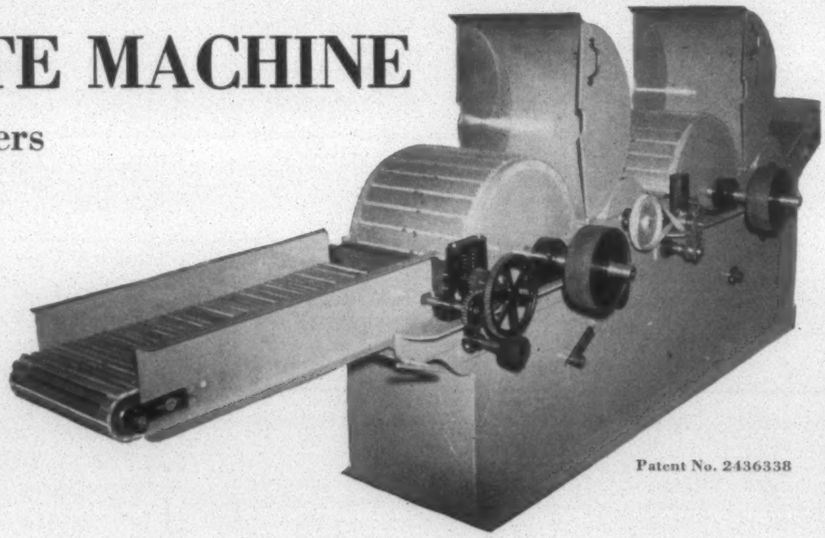

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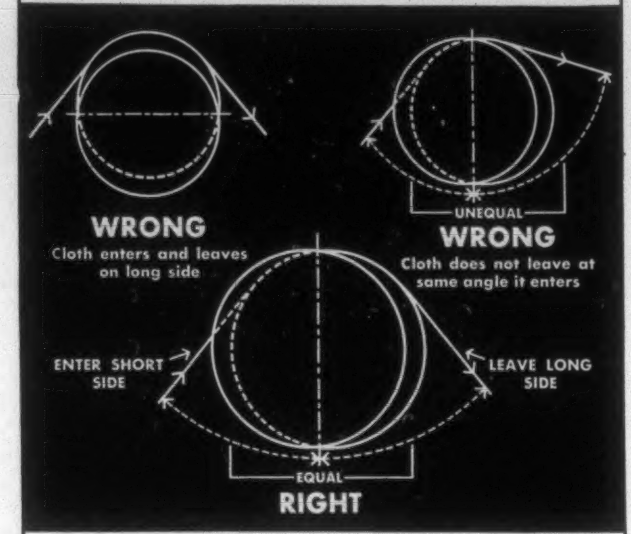
WRONG
Cloth enters and leaves on long side
UNEQUAL
WRONG
Cloth does not leave at same angle it enters
ENTER SHORT SIDE
LEAVE LONG SIDE
EQUAL
RIGHT

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There are many ways in which cloth can be led over this expander, but only one which will give the best results.

Shown above is a Mount Hope Free-Wheeling Expander with cloth going over it in three different ways. The first two methods are incorrect, because the cloth enters and leaves on the long or convex side in the first, and does not leave at the same angle at which it enters in the second. The third, and correct way, is to have the cloth enter on the short or concave side and leave on the long or convex side at the same angle at which it entered. This method alone gives maximum effectiveness to the Expander.

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- **Expanders may be set at any desired angle to the cloth to adjust the amount of widthwise stretch produced.**
- **Ball bearings, grease packed, are securely mounted in steel spools to outlast many Neoprene sleeve coverings, and so designed that they cannot stick nor turn on the axle and cut it.**
- **This expander is suitable for all fabrics, including rayon marquisette and rayon and cotton tire cord, plastic film and paper.**
- **We will be glad to assist you, free of charge, with your cloth opening, guiding, or cross-stretch problem.**

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author of the report, Capt. Raphael S. Krausen of the Chemical Warfare Service. The basis of the copper recovery system was the use of basic copper sulphate instead of copper oxychloride in ammonia to dissolve the cellulose. The new method of precipitation and preparation of solution made it possible to utilize the copper, recovered by means of the Wofatite filter, in a form readily convertible to the needs of the process. The Wofatite filter is an ion exchange resin of the bakelite type having active sulfo-groups. It is reported to have unusual ability to absorb copper. Summaries of the copper absorption and ammonia recovery processes are included in the report. The investigation also revealed that the Germans had developed a machine to continuously spin cuprammonium rayon from the beginning of the process to the final winding of the threads on spools. The system is entirely mechanical and is adjusted to exert only enough tension on the fibers to keep within elastic limits. After spinning, the threads are continuously de-copperized, washed, prepared or sized, dried and humidified to equilibrium moisture content. The entire process takes 135 seconds from solution to the finished yarn wound on the spools.

The report (PB-177; *I. G. Farbenindustrie in Dormagen;* mimeographed, 25 cents; 131 pages) also contains information on cellulose for cuprammonium rayon, staple fiber production, synthetic upholstering material, cellulose acetate, acetylation of cellulose fibers, phlegmatization of propellants, polyurethane, and miscellaneous research activities at the Dormagen plant. The British report PB-79641 *(Continuous Spinning of Cuprammonium Rayon at J. P. Bemberg, Wuppertal and I. G. Farbenindustrie, Dormagen;* microfilm, $2; photostat, $6; 77 pages) gives detailed information about the development of the continuous spinning system at J. P. Bemberg. Five machines representing successive stages of development of the continuous process at the plant are explained fully. One of the machines was under construction in November, 1946, when the plant was investigated. The machine in operation at I. G. Farbenindustrie Dormagen plant is also described and properties of yarn produced on this machine are discussed. Proposed modifications for future machines for this plant are given. Numerous photographs and drawings of machines at both plants and information regarding relevant J. P. Bemberg patents are appended.

The five translations are: PB-177-s *(Yearly Report on the Recovery of Copper in the Dormagen Plant of the I. G. Farbenindustrie Akeitngellschaft;* 1943; mimeographed, 75 cents; 16 pages) gives an account of the conversion of the Dormagen plant to the Wofatite process and describes the new process in detail, giving its advantages and disadvantages. A complete description of the ammonia recovery process is also given. PB-177-S-2 (German language report PB-19589) *(Rayon and Cuprama, Dormagen Plant of the I. G. Farbenindustrie A. G.;* March, 1945; mimeographed, 75 cents; 14 pages) describes the recovery of copper and ammonia, the improvement of cellulose, and progress made during the war in the field of artificial silk. It suggests methods to cut production costs and improve the quality of rayon. Capacities, stocks of raw materials as of February, 1945, and labor are discussed. PB-177-S-3 (German language report (PB-19583) *(NH_3 Recovery from the Blue Water of the Rayon and Cuprama Plants in Dormagen, I. G. Farbenindustrie, A. G.;* May, 1945; mimeographed, 50 cents; ten pages) explains the process of ammonia recovery from copper ammonium sulfate solution in its various stages of operation and describes the complete installation of equipment. Power balance and costs for ammonia recovery are given. PB-40457 *(The Dureta Machine in the Manufacture of Cuprammonium Rayon;* microfilm, 50 cents; photostat, $2; 24 pages) gives a full description of the automatic Dureta process for the continuous spinning of cuprammonium rayon and compares it with previous methods. The importance and profitableness of the process and patent details are also discussed. A supplement to the report (PB-40457S, microfilm, $1; photostat, $1) contains seven photographs of the Dureta machine. A previous press release, OTS-735, describes this report and the supplement in full. PB-19584-T *(Report of the Plant Processes and Development Work of the Cellulose Acetate Department of the I. G. Dormagen Plant;* mimeographed, 50 cents; ten pages) tells of a new method for the production of technical acetyl cellulose in practice at the Dormagen plant since 1933. Seven different cellulose acetate types, differing in their content of combined acetic acid, were manufactured here and placed on the market under the names of Cellit T, M, F, K, LX, L, and Serikose. In every case the cellulose is first converted into triacetate, and from the triacetate stage only is it hydrolyzed to the desired acetic acid content by addition of water and sulfuric acid of hydrolysis.

Sees Industry As Political Propaganda Target

Government in its effort to minimize inflationary tendencies that are the direct result of its own actions is likely in this election year to choose textiles among other industries "for a continuous barrage of unfavorable publicity, if not downright calumny," W. Ray Bell, president of the Association of Cotton Textile Merchants of New York, stated Feb. 5 in his report at the association's annual meeting. Such a campaign, as a matter of fact, started some time ago, he declared, referring to various investigations of textiles made over the past year. Meantime press advices have suggested that the Federal Trade Commission currently is planning a psychological attack on prices. This is the result of its failure to find a case for prosecution, and its intention to sit in judgment on market prices and business earnings "to the extent that if these exceed some arbitrarily chosen standards, the particular industry or individual business firm will be pilloried as an extortioner, regardless of the merits in any particular situation.

"Perhaps this is a misinterpretation," he said, "and I hope it is, for I have little faith in the superior wisdom of the F. T. C., or any other bureaucratic agency for that matter, as replacement for the hundreds and thousands of market decisions that are being made daily by buyers and sellers over the entire country. These reflect the inexorable movement of influences in a post-war world which is struggling to get back to normal methods and activities that are unhampered by artificial factors. In any event, it is an interesting point whether the basic authority of the F. T. C. was ever intended to embrace such forays into the ordinary business affairs of the nation."

Mr. Bell pointed out that inflationary tendencies are the direct result of the government's own actions. He cited increased government spending from $9 billion in 1939 to $36 billion now, high tax rates, increase of money in circulation, government purchases of essential commodities, farm price support policies, home financing, and intermittent encouragement of bigger wage demands. "This partial summary of government actions whose effect could only be

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COTTON MILL MEN SEE EYE TO EYE (CI-41) WITH US

View of the CI-41 Eye, regular wind, showing the thread holding hook

CI-41X Eye, reverse wind

The new CI-41 shuttle eye, with the inner hook and the outside lock, marks another outstanding Watson-Williams shuttle improvement. Already a score of cotton mills are acknowledging the quick threading qualities of this new eye, and the surety with which the outside lock keeps the thread constantly in place. Ask your Watson-Williams representative to show you the new CI-41 eye.

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to increase and perpetuate higher levels of value, suggests that in stigmatizing industry with the charge of reckless marketing, the government should look to the cleanliness of its own hands." He cited the all-time record production for a peace year of 11 billion square yards of cotton textiles in 1947 and the sharp upward surge in the production of those fabrics which are particularly in public demand. Comments as to pricing of textiles frequently concentrate on one or two multi-use items in tight supply and ignore vast areas where values have been conservative ever since free markets were restored. Even the items selected as a basis for criticism usually are chosen in comments on textiles as examples because of spot prices made by resellers, and ignore the heavy discounts at which mills sell the bulk of production.

At the annual meeting four directors were chosen for terms of three years: Saul F. Dribben of Cone Export & Commission Co., Inc.; John H. Hughlett of Dan River Mills, Inc.; Roger Milliken of Deering, Milliken & Co., Inc.; and Stanley Phillips of Cannon Mills, Inc. The annual report of R. Edgar Benson, Jr., as treasurer, and of John L. Severance, as secretary, also were submitted.

Warner & Swasey To Produce Sulzer Weaver

Warner & Swasey Co. expects to commence limited production of the Sulzer weaving machine by the end of 1948, James R. Longstreet, chief engineer of the firm's textile division, told the Pennsylvania Textile Executives Association Jan. 31 at the organization's fifth annual banquet, held in Philadelphia. Warner & Swasey refers to the machine as the Sulzer weaving machine since the Swiss firm, which designed it, has decreed that it cannot be called a loom, Mr. Longstreet stated. The machinery executive's presentation was divided into a talk on the events leading up to Warner & Swasey's entrance into the textile machinery field, and on a pictorial portrayal of the company's two major projects in textile machinery at present; the pin drafter and the Sulzer weaving unit.

The Sulzer machine is a mechanical marvel, the speaker asserted. It was designed in Switzerland by tool room methods on the metric system and would prove very costly as designed abroad, he added. Warner & Swasey has redesigned the machine to American system of measurement and production. Chief difference of this machine from the ordinary loom lies in the fact that it produces cloth by means of fill-in pieces, Mr. Longstreet stated. "The machine has no self-contained package within the shuttle," it runs at high speed and will be constructed in wide widths, he added, probably starting at 90 inches and possibly even going up to 150-inch looms.

"This loom will handle just about the whole gamut of fibers you can get," Mr. Longstreet told the executives' group. He disclosed that the machine has handled sugar bag yarn with 95-97 per cent efficiency; has handled the "new metal yarns of gold and silver" and also has been run on unslashed spun rayon.

Popular opinion to the contrary, the Taft-Hartley Law will serve to make only one strike out of 20 subject to legal correction. This fact was pointed out by O. C. Cool, director of the Labor Relations Institute, New York City, in an address before the Controllers Institute of America in Chicago recently.

Water Repellent Gives Shrink Resistance

A water repellent which also provides shrink-resistance for rayon staple fiber is described in a report now on sale by the Office of Technical Services, Department of Commerce. The product developed since the war was scheduled for production in 1947. It was discovered by O. T. S. investigators at the I. G. Farbenindustrie Ludwigshafen plant in the course of a survey of synthetic detergents manufactured in Germany. The product, referred to as LU 3/158a, is the octadecyl ether of tetramethylol acetylene urea. Although complete information on its production was not obtained, a chemical diagram of its production is contained in the report. In its preparation acetaldehyde is oxidized to glyoxal and condensed with urea. The resulting ureide is converted to the tetramethylol compound which is esterified with octadecyl alcohol, the report states. The product is applied by padding in an aqueous bath resulting in a five per cent take-up in the rayon. It is then dried, baked and washed. Tests showed the product to be more fast to laundering and to have better repellency than other German products such as Velan, Peristols and octadecylethylenimine, the report states.

The manufacturing steps are described in the two-page report (PB-81830, *Water Repellent for Rayon Staple Fiber)* which sells for 25 cents a mimeographed copy. The same product was mentioned but not described in detail in a report previously released by O. T. S. (PB-3875, *Records of Wartime Improvements in Fiber Manufacture and in Fiber Processing,* mimeographed, three pages, 25 cents). The report, prepared for O. T. S. by Julian F. Smith, U. S. Office of Naval Research, is a general description of textile auxiliary manufacture at the I. G. F. Ludwigshafen plant. A more comprehensive report on the production of textile auxiliaries at Ludwigshafen (PB-32565, *Textile Auxiliary Products,* mimeographed, 78 pages; $2) prepared by British investigators is also available from O. T. S. It contains data on synthetic textiles, detergents, water repellents, wetting agents and surface active substances. Orders for reports should be addressed to the Office of Technical Services, Department of Commerce, Washington 25, D. C., and should be accompanied by check or money order payable to the Treasurer of the United States.

Chemists Institute Meeting Date Changed

The date of the annual meeting of The American Institute of Chemists has been changed from May 8 to Friday, May 7, Dr. Dee Snell, president of the institute, has announced.

The change was made to enable the New York Section of the American Chemical Society to meet jointly at the Institute's Silver Anniversary dinner at the Waldorf-Astoria Hotel, New York City. At that time, the institute will present its gold medal to Dr. Charles Allen Thomas, president of the American Chemical Society. Dr. Thomas is executive vice-president and technical director of Monsanto Chemical Co., St. Louis, Mo. He will combine his acceptance speech with his previously scheduled address before the American Chemical Society group on May 7. The medal is awarded annually for noteworthy and outstanding contributions to the profession of chemistry. The award will

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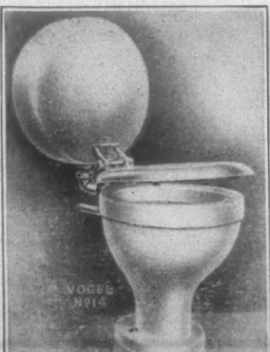

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1947 Finishing Activity Surpasses 1946

A total of 8,661,000,000 yards of cotton, rayon, nylon and similar fabrics were bleached, dyed, printed and finished in 1947, the Bureau of the Census has announced. This was slightly above the 1946 production.

Census said 2,258,000,000 yards of cotton, rayon, nylon and similar fabrics were bleached, dyed, printed and finished in the fourth quarter of 1947. This was 17 per cent above the production in the third quarter 1947, and slightly above the fourth quarter 1946. Most of this increase is due to the fact that the fourth quarter data is for a 14-week period instead of the customary 13-week period, it was pointed out.

TOTAL YARDAGE BLEACHED, DYED OR PRINTED
(In millions of linear yards)

Type of goods	Jan.-Dec., 1947*	Jan.-Dec., 1946†	Oct.-Dec., 1947*
Bleached, dyed or printed goods, total	8,661	8,648	2,258
Cotton	6,904	6,923	1,793
Rayon, nylon and similar fabrics	1,757	1,725	465
Bleached and white finished goods, total	3,775	3,578	978
Cotton	3,568	3,380	929
Rayon, nylon and similar fabrics	207	198	49
Plain dyed and finished goods, total	2,962	3,037	768
Cotton	1,760	1,872	446
Rayon, nylon and similar fabrics	1,202	1,165	322
Printed and finished goods, total	1,924	2,033	512
Cotton	1,576	1,671	418
Rayon, nylon and similar fabrics	348	362	94

*Preliminary. †Revised.

U. S. Overseas Trade Methods Criticized

The day has passed when all American industry needs to do to sell goods abroad is to dump it on foreign docks, John B. Wathey, vice-president in charge of research and development of the Bocon Chemical Corp., said this month. Dollar shortages abroad and rapidly reviving European industry make it necessary for this nation's manufacturers—particularly firms which supply dyestuffs or finishing materials or chemicals used in processing—to start doing a selling job, he said.

Mr. Wathey made his statement at a press conference following a trip to Sweden during which he visited more than half of that nation's woolen mills. "The Swedes think American radios, refrigerators and automobiles are better than anything foreign factories can produce," he said. "They don't say the same thing, however, about our dyestuffs and other textile chemicals. I think the reason can be found in a comparison of European and American selling methods." He pointed out that before the war personal service was the keynote of sales methods, whereas American firms "too often" let printed literature and label directions be their sole customer helps.

Mr. Wathey also discussed comparisons between American and Swedish mills in manufacturing methods and research and testing facilities. He said that this country is 20 years behind Sweden in treating woolens at the mill to prevent moth damage. More than 90 per cent of Swedish fabrics are so treated, he said, and the buying public prefers mothproofed materials even though it must pay a premium for the processing.

In addition to use as a shoe lining, cotton cloth is widely used in the shoe industry for backing thin leathers for extra strength.

Wool Advisory Group Makes Recommendations

Wool research undertaken in the Research and Marketing Act program for 1948 met with favorable reception by the Wool Advisory Committee at its second meeting held in Washington Feb. 6-7. In addition to reviewing the projects financed with R. M. A. funds, the committee was informed of other research pertaining to wool in the Department of Agriculture and state agricultural experiment stations. On the basis of this information, several recommendations were made for further work in the next year. The committee expressed special interest in work under R. M. A. designed to analyze domestic wool requirements and urged that this work be expedited in view of the decline that is occurring in sheep numbers in the United States. It suggested for new work in the 1949 program that consideration be given to the estimation of future demands for different grades of wool. This was believed to be particularly important as a guide to wool growers in their current production plans and breeding programs.

Other new work suggested by the committee included the preparation of foreign wool standards and representative samples of such wool. Particular emphasis was placed upon controversial imported wools upon which duties are assessed lower than the specified rate. Standard samples of this wool should, in the opinion of the committee, be made available to customs officials. Also recommended was the development of machines to demonstrate and test out the ultimate spinning qualities of single fleeces of wool. A device of this kind operated under standardized controlled conditions would be useful in providing measurements that would help solve biological problems. Nutritional and breeding problems were listed high among those that would be benefited by the perfection of such a machine.

Committee members, all of whom attended the meeting, are: chairman, J. B. Wilson, secretary of Wyoming Wool Growers Association; McKinley, Wyo.; Geo. L. Anderson, Adams and Leland, Boston; R. S. Bartlett, vice-president, Botany Worsted Mills, Inc., Passaic, N. J.; C. J. Fawcett, general manager, National Wool Marketing Corp., Boston; J. A. Hill, dean, College of Agriculture, University of Wyoming, Laramie, Wyo.; L. A. Kauffman, secretary, Ohio Wool Growers Co-operative Association, Columbus, Ohio; John H. Nichols, Jr., Nichols & Co., Boston; Sylvan J. Pauly, president, National Wool Growers Association, Deer Lodge, Mont.; Howard Vaughn, president, California Wool Growers Association, Dixon, Calif.; Ray W. Willoughby, vice-president, National Wool Growers Association, San Angelo, Tex.; James F. Wilson, wool technologist, Agricultural Experiment Station, University of California, Davis, Calif.

Submit Revision Of Standards For Acceptance

A recommended revision of Cotton and Rayon Velour (Jacquard and Plain), Commercial Standard CS103-42, has been submitted to producers, distributors and users for acceptance, according to an announcement of the Commodity Standards Division of the National Bureau of Standards. Proposed by the Upholstery and Drapery Fabric Manufacturers Association, Inc., the recommended revised commercial standards includes a change in name, an increase in the number of pile tufts, an increase in the number of picks, and a change in the method of taking test specimens. It includes requirements for weight of finished fabric, weight

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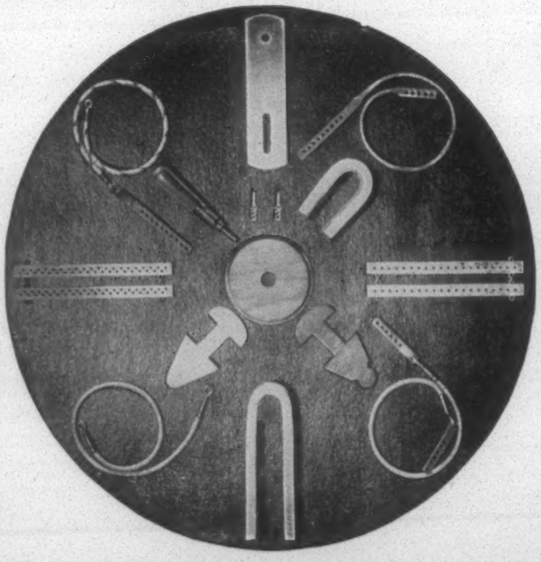

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and density of pile, construction of the fabric back, colorfastness, and resistance to wear. Provision is made for methods of test and for certifying and identifying material conforming to the recommended revision.

The changes recommended will provide a higher quality product, which it is believed is in accord with the desires of distributors, furniture manufacturers and ultimate users. Mimeographed copies of the recommended revision may be obtained from the Commodity Standards Division, National Bureau of Standards, Washington 25, D. C.

Glass Fabric Used In Conveyor Belt

Development of a hot material conveyor belt using glass fabric instead of the cotton fabric used in the conventional belt made for this service is announced by The B. F. Goodrich Co., Akron, Ohio. The company says that the tensile strength of each ply of glass fabric is approximately equal to the standard 32-ounce cotton fabric used in conventional belts. Advantage of glass fabric for this service, the company says, is its resistance to loss of carcass strength under high temperatures. Cotton fabric loses strength rapidly under these severe operating conditions.

Cite Aluminum Uses In Textile Industry

Although aluminum has been used in the textile industry for a number of years, its applications are expanding as the result of the introduction of new high-speed textile processing equipment and machinery, according to a report by the Aluminum Co. of America, Pittsburgh, Pa. Aluminum's light weight and high resistance to corrosion by textile chemicals make it an ideal material for the high-speed reciprocating machinery being demanded by the industry, it is stated. Among the growing uses for aluminum in the textile industry are spinning buckets, bobbins and spools, tricot beams, section beams, cloth rolls, and parts for spinning, twisting and weaving equipment. During 1947 a new aluminum development relieved the textile industry of another persistant headache, the report claims. This product, an extruded aluminum loom-beam barrel, cuts competitive costs by eliminating expense incurred in resurfacing and the eventual replacement necessary with the wood-beam barrels. The aluminum beam barrel is approximately 25 per cent less expensive than even the cheaper wooden product, and it easily withstands rough handling as well as high yarn pressures.

Lowenstein Foundation Offers Scholarships

The Leon Lowenstein Foundation, Inc., New York, announced recently the establishing of awards for scholarships to students who have a parent, or other close relative, employed by M. Lowenstein & Sons, Inc., or a subsidiary of the company. The firm operates a number of mills in the Carolinas. The scholarships will cover a complete four-year course with the expectation that male students will major in textile subjects. Major considerations in granting the awards will be the academic record of the student, character and reputation, need of financial assistance, leadership in school activities and record of parents, or other near relative, as an employee.

A committee representing each plant or unit will determine the eligibility. Ten scholarships a year will be granted, to be distributed through the various cotton mills and the bleachery, as well as the sales and merchandising organization. Each scholarship will be continued for four years on an annual renewal basis. The plan will become effective with the academic year beginning September, 1948. It is expected that the committees will announce their decisions on or before Aug 15. The establishing of these awards for scholarships by the Leon Lowenstein Foundation, Inc., is a gesture that is welcomed by the community at large. It offers a splendid opportunity for deserving students by enabling them to acquire knowledge which will open the doors to key positions in the textile industry. The tradition of offering every citizen of this country an equal opportunity is well exemplified in these scholarships. The foundation is confident that it will be well rewarded in its aim to develop men and women who will be the outstanding citizens of tomorrow.

Textile Course At University Of Delaware

Dr. Joseph B. Quig, assistant manager of the development section of the Du Pont Co.'s Rayon Technical Division, has been appointed instructor for a new course on textiles which was to be initiated by the University of Delaware Feb. 9. The course, one of those in the university's academic extension plan, will cover the basic properties of natural and synthetic fibers and the production, economic, technological, and chemical phases of all fibers and fabrics. Exhibits, motion pictures, and plant trips will augment the evening lectures.

Dr. Quig has a broad knowledge of the textile industry, and is an experienced teacher. He joined Du Pont's rayon organization in 1926 as a chemist and has served successively as an assistant chemical supervisor, research chemist, and manager of technical service for the Rayon Division before entering upon his present assignment five years ago. After World War II, Dr. Quig was appointed to the "textile team" which was formed by the Foreign Economic Administration to investigate the industry in Germany, Austria and Italy.

Dr. Quig, who will add his teaching to his Du Pont duties, is a member of the American Chemical Society, American Association of Textile Technologists, Chemical Corps, American Association of Textile Chemists and Colorists, and the Institute of Textile Research. He has recently been named chairman of the board of visitors of the Textile Research Institute at Princeton, N. J. E. F. Altmaier of the Rayon Division and Carl I. Taber of the Nylon Division will assist Dr. Quig.

Modern Textile Cost Methods Studied

The Cotton-Textile Institute, Inc., has just issued a study of modern cost methods and their application to all phases of cotton textile manufacturing. The analysis, which is available in book form, examines the pre-determination of costs with special emphasis on raw material, labor and overhead expenses and the drastic changes that have taken place in these cost elements since Pearl Harbor. Also treated are costs in relation to volume of production and machinery speeds. Several chapters are devoted to calculation of fabric costs and the relation of costs to the guidance of sales policies.

The book contains three charts and 20 tables. It was prepared by the institute's industrial accounting division

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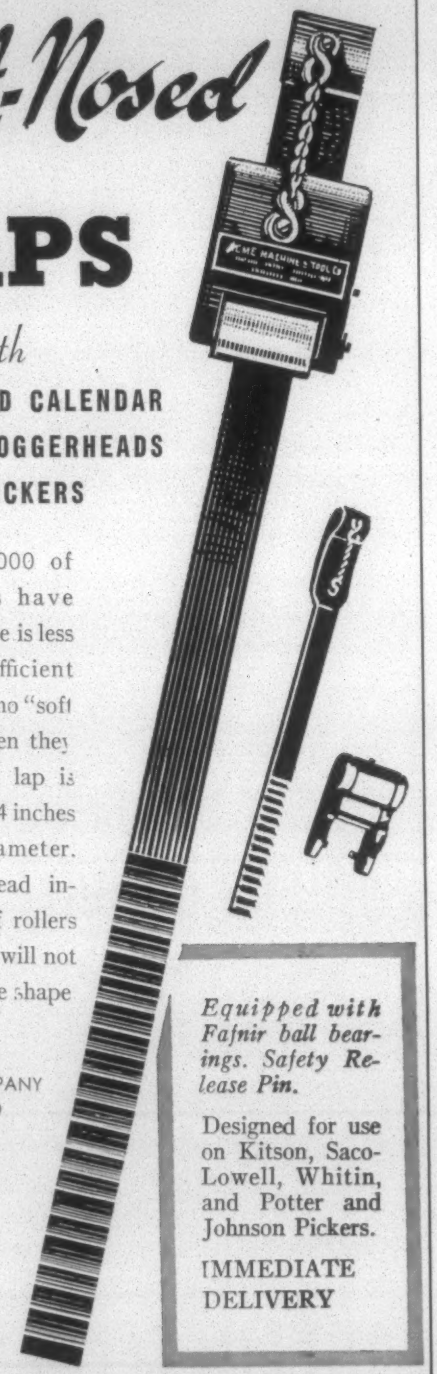

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headed by Lewis F. Sawyer under the supervision of the institute's committee on costs, which includes the following manufacturers: Frank C. Williams, president, Roanoke Mills Co., Roanoke Rapids, N. C.; R. H. Chapman, vice-president, Riverdale Mills, Spartanburg, S. C.; Frank W. Lyman, president, Fitchburg Yarn Co., Fitchburg, Mass.; Andrew W. Macy, treasurer, Nashawena Mills, New Bedford, Mass.; G. O. Lienhard, president, Chicopee Mfg. Co., New Brunswick, N. J.; William J. McKemie, Avondale Mills, Sylacauga, Ala.; Hyman L. Battle, manager and treasurer, Rocky Mount Mills, Rocky Mount, N. C.; and Andrew B. Calhoun, president, Equinox Mill, Anderson, S. C.

Would Clarify Usage Of Word "Rayon"

The Tennessee Eastman Corp., subsidiary of the Eastman Kodak Co. and a producer of cellulose acetate textile fibers, announced Jan. 27 that it had discontinued use of the word "rayon" as a generic name for its fibers and the products made from them. In explanation of this decision, James C. White, president and general manager of the corporation, said, in part: "Two very different textile fibers are now being offered to the public as 'rayon.' One of them is known chemically as viscose, or regenerated cellulose, the other as cellulose acetate.

"Today these two man-made fibers may be found in retail stores in the same types of apparel and home furnishings, such as women's dresses and underwear, men's suits and shirts, linings, bedspreads, curtains and upholstery. Viscose and cellulose acetate differ widely in most physical and chemical properties of importance to the consumer. They are not interchangeable in any use with the same degree of serviceability. They are, in fact, about as unlike as any two natural fibers one could name in such critical qualities as moisture absorption, shrinkage, resistance to wrinkling, soiling, mildewing, ease of washing and ironing, and ability to hold an ironed-in crease. In Tennessee Eastman's opinion, it is unfair to offer two such diverse textile materials to the public as if they were one and the same substance, especially under a name which for a long time connoted only one of them. In an attempt to remedy what is now an increasingly serious situation, the Tennessee Eastman Corp, desires to put this matter of nomenclature clearly before the trade and the consumer, and to encourage the restriction of the word 'rayon' to its original, long-accepted meaning in textile commerce," Mr. White declared.

The rule in Great Britain, it is pointed out, has been to use "rayon" to designate all man-made fibers, including the more recently developed synthetics like nylon, as well as the cellulose base fibers. The divergence of the British and American views has been a matter of discussion for some time. One difficulty that the British are said to have in understanding the present A. S. T. M. definition arises out of the fact that it covers both regenerated cellulose and cellulose acetate fibers. The British see no reason why other man-made fibers should not be included, as is the case with the British Textile Institute definition of rayon.

The next move in the matter of rayon nomenclature may come from Committee D-13 of the American Society for Testing Materials, which will meet in New York March 17, 18 and 19. At that time it is believed that the task committee of that organization, which has been working on this problem, will submit recommendations regarding possible changes in the official A. S. T. M. definition of rayon.

Textile Wages Lead Cost Of Living

Both hourly and weekly wages in the nation's cotton textile mills are at an all-time high, having tripled since 1939, and are far in advance of the rise in the cost of living, according to an analysis by the Cotton-Textile Institute, Inc. In its study, which is based on official data collected by the Bureau of Labor Statistics, the institute points out that the average weekly pay last November was $42.47. In August, 1939, just before hostilities broke out in Europe, the weekly rate in cotton spinning and weaving mills was $14.01. In short, weekly wages have increased 300 per cent over the pre-war average.

On the other hand, between August, 1939, and November, 1947, the B. L. S. cost of living index rose to 164.9 or just a shade less than 65 per cent over the 1939 average. Judged on this basis, wages in mills have far outstripped the upswing in living costs. In November of last year, workers in mills were employed on an average of 40.4 hours per week as compared with 36.6 hours in August, 1939, when the hourly rate was 38.2 cents. Since then, hourly rates have risen to $1.051. At present the industry is giving employment to 516,900 persons as against 418,400 in 1939.

The institute points out that wage rate comparisons do not tell the full story of the enormous gains in living standards of cotton mill employees since the pre-war years. Wage statistics as presently compiled do not take into account the so-called "supplementary benefits" such as vacation and holiday pay, sickness and hospitalization insurance, and contributions to welfare funds. If these additional costs to mills along with social security and unemployment insurance taxes are included, labor costs are 325 per cent of what they were back in 1939.

Two Named Directors Of C.-T. I.

The Cotton-Textile Institute announces that Walter G. Regnery, vice-president and general manager of the Joanna Cotton Mills, Goldville, S. C., and Rudolph C. Dick, president and treasurer of the Naumkeag Steam Cotton Co. of Salem, Mass., were elected directors at the last meeting of the board. New members of the institute voted at the same meeting include: Clyde Fabrics, Newton, N. C.; Lone Star Cotton Mills, El Paso, Tex.; Beaunit Mills, Rockingham, N. C.; Southern Webbing Mills, Inc., Greensboro, N. C.; G. Reis & Bro., Inc., New York City; Century Ribbon Mills, New York City; A. H. Rice Co., Pittsfield, Mass.; Wovencraft, Inc., New York City.

Army Needs Clothing, Textile Economists

The urgent need for a considerable number of clothing and textile economists and industrial specialists to assist in the development of the New York Quartermaster industrial mobilization planning program has been announced by the Army. Applications may be made through the Personnel Division, New York Quartermaster Purchasing Office, 111 East 16 Street, New York, N. Y. Positions open include the following highly specialized categories:

Clothing and textile economists to head these phases of industrial mobilization planning and to assume responsibility for the development and execution of the programs. Applicants must have a minimum of six years manufacturing experience at top supervisory level; detailed knowledge

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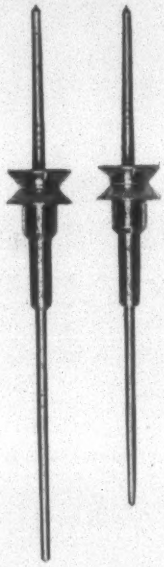

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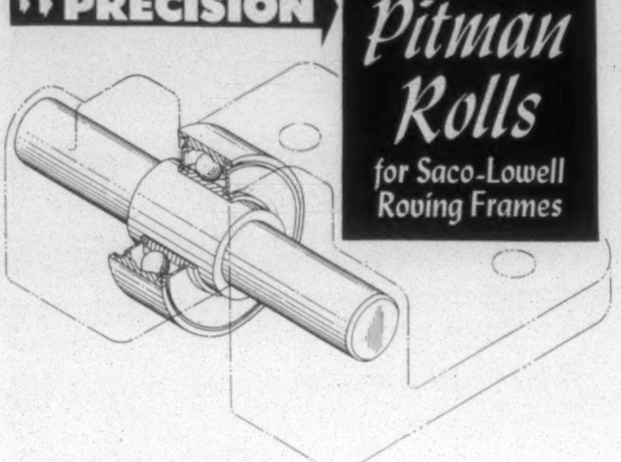

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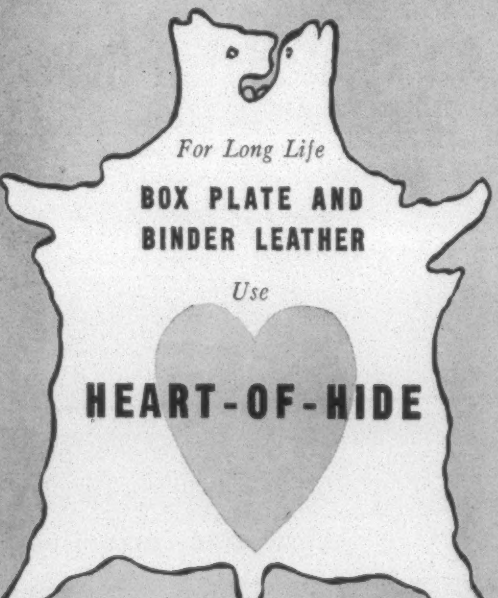

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The mission of the industrial mobilization planning division is to insure the prompt availability of adequate manufacturing facilities in order to provide needed Quartermaster supplies and equipment for U. S. Army use in the event of a national emergency.

Georgia Textile Leaders Meet May 5-7

The 1948 convention of the Cotton Manufacturers Association of Georgia will be held at the Sheraton Plaza and Princess Issena Hotels, Daytona Beach, Fla., on May 5-6-7, according to a recent announcement by T. M. Forbes, executive vice-president. All reservations will be made through the association's executive offices in Atlanta, Citizens and Southern National Bank Building, Atlanta 3, Ga.

This year's gathering will be the 48th annual meeting of the Georgia Association, which was organized in 1900, at Warm Springs, Ga., and which is one of the oldest trade associations in the entire textile industry, and it will bring together the owners and chief executive officers of Georgia's approximately 200 textile plants. Program arrangements for the 1948 affair will be announced at a later date.

Present officers of the association are: president, Charles C. Hertwig (president of Bibb Mfg. Co. at Macon), vice-president, R. D. Harvey (manager of Pepperell Mfg. Co. at Lindale); treasurer, N. Barnard Murphy (vice-president and general manager of the Trion Division, Riegel Textile Corp., Trion); executive vice-president, Mr. Forbes; traffic manager, Rupert L. Murphy of Atlanta; and secretary, Frank L. Carter of Atlanta.

Offer Index Of I. G. F. Dyestuffs

A comprehensive index of the several thousand dyestuffs manufactured by I. G. Farbenindustrie is now on sale by the Office of Technical Services, Department of Commerce. The index of dyes comprises four volumes of a report prepared by O. T. S. Investigator F. O. Robitschek. The index contains the reel and frame numbers of the O. T. S. microfilm report in which the manufacturing details of the dyes are recorded. Microfilm reels or enlarged prints of the microfilms are available from O. T. S. The report is divided into two parts. Volumes I and II comprise the alphabetical index, and Volumes III and IV the systematic register and the appendixes. The systematic register has the dyes arranged according to dyeing characteristics and color. The index thus provides a key to the O. T. S. microfilm reports.

The reason for the apparent leadership and quality of German dyestuffs is not necessarily found in the high quality of the product, Mr. Robitschek states, but in the diversity of colors brought on the market. Unlike dyestuffs manufactured in other countries where each company specializes in certain lines, I. G. F. had a complete selection of colors in any shade and for any purpose. No shade was too complicated to match and a technically well trained group of experts was attached to each sales office. The report contains identification details on the following major types of dyestuffs: azo dyes, naphtol and color salts, triphenyl dyes, sulphur dyes, anthraquinone and vat dyes, hydron dyes, solubilized vat dyes (indigosole), indigo 100 per cent, and nitrocellulose and casein dyes.

The four volumes are: PB-60946-r *(Dyestuffs Manufacturing Processes of I. G. Farbenindustrie A. G.;* mimeographed, $2.50; 95 pages). PB-60946-rl *(Dyestuffs Manufacturing Processes of I. G. Farbenindustrie A. G.;* mimeographed, $2.75; 102 pages). PB-60946-r2 *(Dyestuffs Manufacturing Processes of I. G. Farbenindustrie A. G.;* mimeographed, $2; 79 pages). PB-60946-r3 *(Dyestuffs Manufacturing Processes of I. G. Farbenindustrie A. G.;* mimeographed, $2.75; 103 pages).

Twelve reels of microfilm are indexed in the above reports, each reel containing the equivalent of about 1,200 pages. All of the processes are written in the original German, except those obtained from the I. G. Farben plant at Hoechst which are in English. Listed below are the numbers and the price of each reel together with the price of enlarged prints:

Microfilm No.	*Price of Reel*	*Price of Enlarged Prints*
17G	$6	$78
18G	3	9
21G	6	87
800CC	6	95

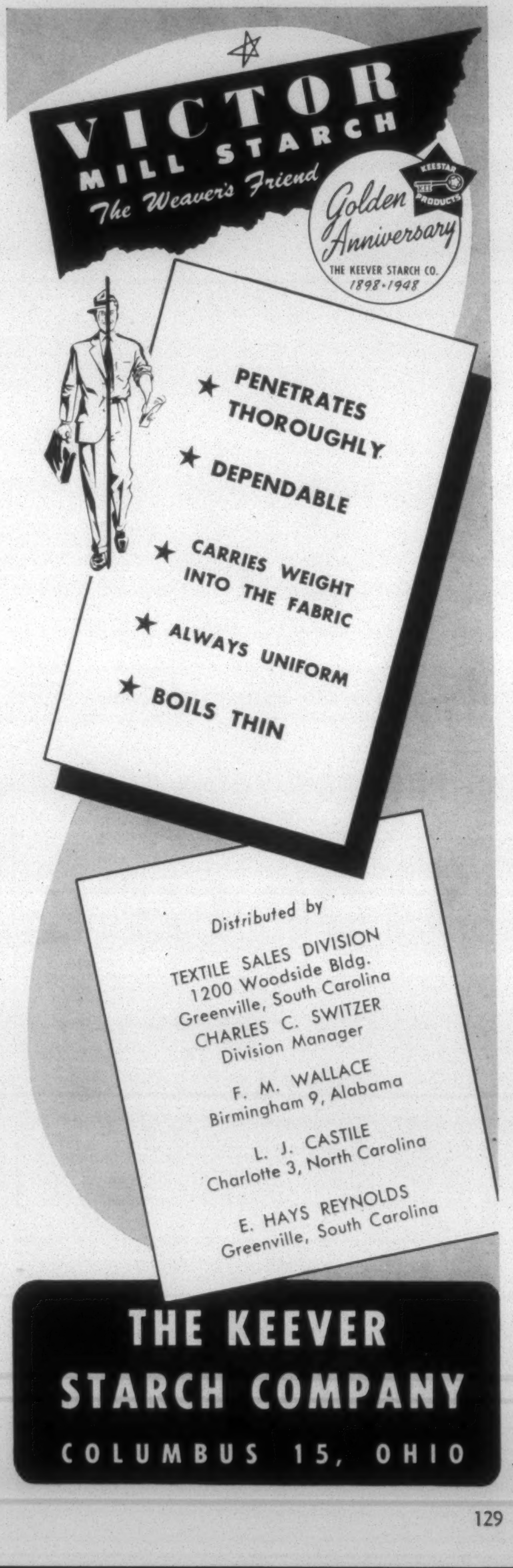
Third Quarter 1947 Rayon Output Listed

Rayon broad woven goods production totaled 456 million yards in the third quarter of 1947, according to the Bureau of the Census, Department of Commerce. This total was 12 per cent higher than in the corresponding period of 1946, but was three per cent below the second quarter 1947. One hundred per cent filament rayon fabrics, 100 per cent spun rayon fabrics, and combination filament and spun rayon fabrics showed increases over the third quarter 1946. The 78 million yards of 100 per cent spun rayon fabrics was 80 per cent higher than in the third quarter of last year. Pile, upholstery, drapery and tie fabrics and all other rayon mixture production was substantially less than the third quarter a year ago.

SUMMARY OF PRFDUCTION, BY CLASS OF FABRIC

Type of Fabrics	July-Sept., 1947	April-June, 1947 (revised)	July-Sept., 1946 (revised)	Pct. Change July-Sept., 1947, From— April-June, 1947	Pct. Change July-Sept., 1947, From— July-Sept., 1946
	(Thousands of linear yards)				
Rayon broad woven fabrics, total	455,500	467,277	408,068	—3	+12
100 per cent filament rayon fabrics	295,093	299,914	247,105	—2	+19
100 per cent spun rayon fabrics	77,916	70,349	43,202	+11	+80
Combination filament and spun rayon fabric	40,111	47,499	38,942	—16	+3
Pile, upholstery, drapery, tapestry, and tie fabrics	11,097	11,177	12,021	—1	—8
All other rayon mixtures	31,283	38,338	66,798	—18	—53
Silk, nylon, glass, and other fabrics	12,465	14,365	17,642	—13	—29

The 295 million yards of flat fabrics made of 100 per cent filament rayon was 19 per cent above the production in the third quarter of last year. Pigment viscose taffetas production of 23 million yards was approximately one-third higher than the third quarter a year ago and the 35 million yards of acetate satins produced in the third quarter 1947 was 89 per cent above the corresponding period of 1946. In the twisted yarn fabrics group, French crepe production of 32 million yards continued to show an upward trend



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which began in the fourth quarter 1946. The 26 million yards of plied yarn fabrics produced in July-September, 1947, period was over one-third higher than in the corresponding period of last year.

The production of 78 million yards of 100 per cent spun rayon fabrics was the highest since this series of quarterly reports was originated covering the July-September, 1943, period. Twills production of 17 million yards and challis production of seven million yards were approximately double the production of these fabrics in the third quarter 1946. The 31 million yards of fabrics made of rayon mixed or blended with cotton, wool, or other fibers continued to show a downward trend and was less than one-half the amount produced in the July-September, 1946, period. In the silk, nylon, glass and other fabrics group, the four million yards of 100 per cent nylon fabrics produced in the third quarter 1947 was 19 per cent below the corresponding period a year ago. Production of two million yards of 100 per cent silk fabrics and silk mixtures containing 51 per cent or more silk was the lowest since the first quarter 1946.

Cotton Week Scheduled For May 17-22

"Cotton—America's Favorite Fabric" will be the theme of National Cotton Week to be observed May 17-22, according to a joint announcement by the Cotton-Textile Institute and National Cotton Council, sponsors of the event. A preliminary survey of retail distributors of cotton products indicates that the event will be marked by an unusually large number of retail promotions. Stores generally reported that supplies of cotton products, for the most part, have improved to the point where it will be possible to stage presentations somewhat along the lines of pre-war promotions.

Distributions of 15 by 21-inch posters to chain stores and wholesalers will get underway in March, while mailings of posters to department and specialty stores will be accomplished early in May. In addition to retail participation, the event, as usual, will be marked by cotton carnivals in many Southern cities and towns, and by special programs in schools.

Steady Demand For Cotton Goods Explained

The sustained demand for cotton goods since V-J Day is due in part to the deficit or vacuum created in the war years by the enormous diversion of production to military and other essential needs, according to a special survey by the Cotton-Textile Institute. The institute estimates this deficit at 13,728,000,000 linear yards. The study points out that in 1942, when cotton textile production reached an all-time high of 11,108,300,000 linear yards, only 51 per cent of this amount was available for domestic civilian use. In 1943, only 43 per cent of the output of mills went into normal domestic channels while only 39 per cent of 1944 production was sold to civilians. By 1945, when the end of the war was in sight, 57 per cent of the out-turn of mills was going into civilian goods.

Commenting on these statistics, the institute states: "The most surprising development in the business situation since the end of the war, and one which has confounded the analysts, has been the sustained demand for 'soft goods,' especially cotton textiles. It is now clear that the forecasters, both government and private, seriously underestimated the demand for all goods, but in no area did estimates prove to be as erroneous as in cotton textiles.

"There are probably many reasons for the error; the memory of the pre-war buyers' market; the failure properly to evaluate the inability of the industry to expand its productive facilities during the war; the growth in population; exaggerated optimism over the recovery of foreign textile industries, etc. An important reason which, in our judgment, has received too little consideration was the extent of the diversion of cotton textiles from civilian consumption to war use, our own and our allies. To be sure, the role of cotton textiles in the war was recognized but seldom in quantitative terms and in relation to its effect on domestic civilian supply. In part this was due to the absence of adequate current statistics concerning W. P. B. programs and distribution.

"The effect of the diversion upon the civilian supply may be measured with a comparison with pre-war availability. In 1937 and 1939, which were only fair years, the yardage available for civilian consumption averaged 8,172 million for the four years 1942-45. Thus, during the war years, when purchasing power was very high, the accumulated loss to the consumers amounted to 13,286 million yards. It is not to be inferred that the 13,286 million yards diverted from civilian use is an accurate measurement of the cotton textile vacuum created by the war which, in addition to current demand, must be filled before production is in balance with demand. The cotton shirts, sheets and bags not purchased and, therefore, not worn out will not be replaced by current purchases of an equal number. It does, however, give a rough but reasonably accurate measure of the drains made on both commercial and consumer inventories and the apparent limited extent to which they have been restored. It should also be noted that the above calculation is based upon availability during 1937 and 1939, a decade ago when both total population and number of families were considerably below the current figures. Since 1939, the population of this country has increased from 130 million to 145 million."

The breakdown of wartime production follows:

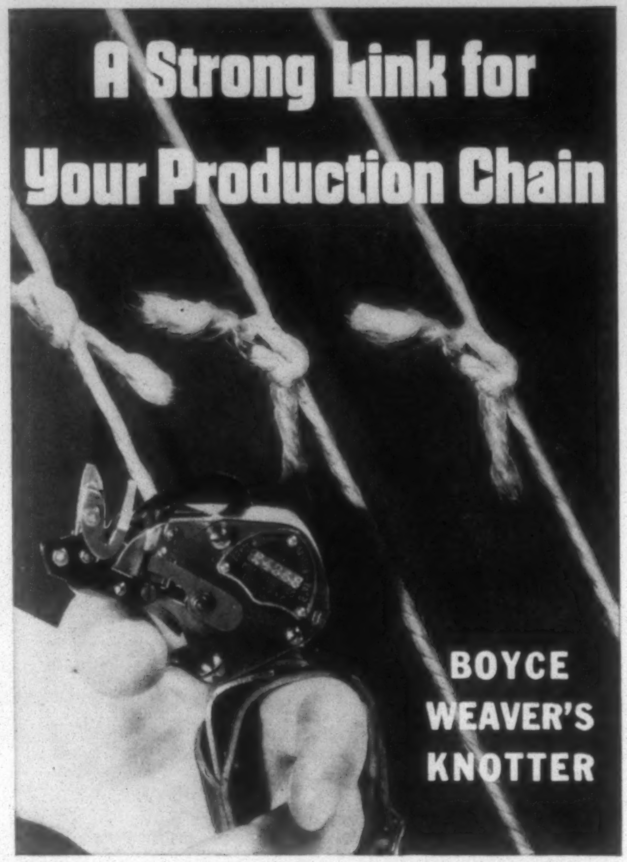
DISTRIBUTION OF WAR TIME PRODUCTION OF COTTON BROAD WOVEN GOODS

(Millions of Linear Yards)

Year	Production	War Use and Exports	Available in Normal Domestic Use	Per Cent for Domestic	Available for War & Export
1937	8,661.3	236.2	8,425.1	98	—
1939	8,287.3	367.5	7,919.8	95	—
1941	10,431.9	593.0	9,838.9	94	—
1942	11,108.3	5,485.3	5,623.0	51	49
1943	10,582.2	5,517.6	5,064.6	48	52
1944	9,546.7	5,789.6	3,757.1	39	61
1945	8,711.7	3,752.2	4,959.5	57	42
1946	9,111.0	759.0	8,352.0	92	—
per cent war use and exports 1942—45					51.4%

Estimate Cotton Consumption For 1947-48

Consumption of cotton in domestic mills is expected to be about 8,750,000 bales in 1947-1948, Joe H. Miller of the Bureau of Agricultural Economics, predicted recently. "This will be lower than the ten million bale consumption last season but well above the 1935-1939 average of 6,900,000," Mr. Miller said. "Mill consumption in August through October, 1947, totaled 2,264,265 bales. This average daily use of 34,701 bales, adjusted for seasonal variation, is equal to an annual rate of 9,200,000 bales. However, inventories of cotton textiles at wholesale and retail levels are gradually coming into balance with demand. Also, our



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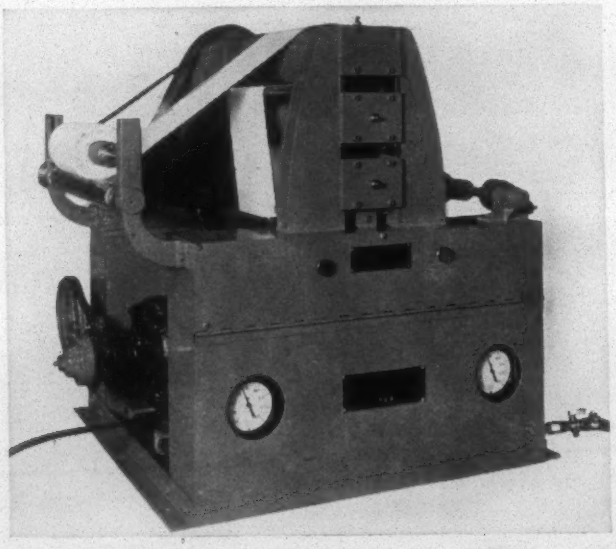
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unusually large exports of cotton textiles are expected to decrease. For these reasons, it appears that this high rate of consumption will drop somewhat before the end of the present season.

"Although the outlook for cotton exports is uncertain, preliminary estimates indicate that they may be about 2,500,000 bales," he continued. "With domestic consumption estimated at 8,750,000 bales, total disappearance during the 1947-1948 season probably will be about 11,300,000 bales. This total was 13,600,000 for 1946-1947 and 11,700,000 for the 1940-1944 average. Our carry-over next Aug. 1 may be around 2,900,000 bales. This would be 400,000 bales more than stocks last Aug. 1. The total would be about a three months' supply at the average rate of disappearance for September and October.

"The national goal for cotton acreage in 1948 has been set at 22 million acres. This is 1,100,000 acres below the 1947 goal and only about three per cent above the estimated 1947 plantings of 21,387,000 acres. If the acreage goal is reached, and if yield and abandonment are about equal to the 1942-1946 average, a crop of about 11,500,000 bales would be produced.

"Cotton production in foreign countries this season is expected to be about 13,200,000 bales, six per cent larger than in 1946-1947 but 3,600,000 bales less than the 1935-1939 average. The carry-over of all kinds of cotton in foreign countries at the beginning of the season was estimated at 15,400,000 bales. It was only 350,000 bales less than at the beginning of the 1946-1947 season, but 6,400,000 bales above pre-war. Mill consumption in foreign countries in 1947-1948 is expected to be about 17,200,000 bales compared to 16 million in 1946-1947 and the 1935-1939 average of 21,600,000. With a supply of 31,100,000 bales, including imports of 2,500,000 bales of American cotton and with a disappearance of 17,700,000, the foreign carry-over at the beginning of the 1948-1949 season may be about 13,400,000 bales. This would be two million less than last Aug. 1, but 4,400,000 more than the 1935-1939 average," he concluded.

Viscose Making Filatex At Roanoke

Filatex, one of the pre-war brands of covered elastic yarn, is again being manufactured on a relatively small scale at the Roanoke, Va., plant of American Viscose Corp., according to reports.

This yarn, which is a natural latex thread covered with textile yarns such as combed cotton yarn, was formerly made in the Filatex Corp. plant at Trenton, N. J. In 1942, when the government requisitioned all rubber tread and elastic yarns, as well as its stock of latex, Filatex Corp. sold its plant and the machinery was transferred to the parent company, Sylvania Industrial Corp., and stored until a few months ago. All the covering equipment, now owned by American Viscose Corp., has been installed and an increasing number of machines are being operated by it in space provided in the rayon plant at Roanoke, Va.

Sales and service for the yarns are now being handled by Filatex Corp. with offices in the Empire State Building. This company is a wholly-owned subsidiary of American Viscose Corp. which acquired it in connection with the merger in September, 1946, with Sylvania Industrial Corp., with which the Filatex Corp. had been associated.

While production is limited, it is expected that the quantity available will increase steadily until full plant capacity is reached in two or three months. A few mills are reported to have been using the product for several weeks both for knitting and weaving.

Filatex elastic yarn is not made in heavy sizes, but is produced only in the finer counts, such as are used in lighter weight corsets and girdles, elastic top hosiery, bathing suits, surgical stockings and similar knitted articles, in addition to elastic satins, bathing suit cloth and other woven fabrics.

Selection of Roanoke for this operation is said to have been influenced by convenience to both South and Middle West, as well as Eastern mills, and also by the fact that labor skilled in handling textile yarns is available. It is stated that emphasis is being placed on quality in getting into production rather than on attaining full production rapidly. It is planned to place sample with additional mills and former customers for this yarn from time to time as volume of production develops to the point where proper service can be assured.

N. C. Textile Foundation Holds Annual Meeting

The annual meeting and dinner of the North Carolina Textile Foundation, Inc., was held at the Greensboro (N. C.) Country Club on Tuesday, Feb. 10. An unusually large number of reservations had been made but, due to a snowstorm and impassable roads, most of the reservations were cancelled and there was an attendance of only 32 members.

There were three important features of the annual meeting: (1) the announcement that donations to the foundation to that date had amounted to $983,528.67, or only $16,471.83 less than $1,000,000; (2) that Neuss, Hesslein & Co. of New York, the largest United States exporter of textile goods, had made a donation sufficiently large to endow a salary supplement and thereby establish in the School of Textiles at North Carolina State College an Edgar and Emily Hesslein Professor of Fabric Construction and Manufacture; (3) that plans were underway to also establish in the School of Textiles a course in "Garment Manufacture and Design" and that Blue Bell, Inc., had taken the lead by pledging $5,000 per year for three years toward a $150,000 fund for the course. It was stated that during the afternoon a group of garment manufacturers had met with members of the board of directors of the foundation and discussed plans.

In the absence of President W. J. "Nick" Carter, who was confined to his home with a severe cold and ordered by his doctor to stay there, and Vice-President A. G. Myers, who could not reach Greensboro, Secretary David Clark of Charlotte presided at the meeting.

Dean Malcolm E. Campbell of the School of Textiles at North Carolina State College described the progress which had been made during the past year and plans for future development. He stated that plans and specifications for the $450,000 addition to the building were complete and that he hoped that it would be possible for construction to begin at an early date. He also stated that $150,000 worth of new and modern textile machinery had been placed. Dean Campbell introduced the three members of his staff who were present: Elliot Grover, yarn manufacturing; Henry Rutherford, textile chemistry and dyeing; and Clarence Asbill, textile machinery design.

Short talks were made by Herman Cone, president of

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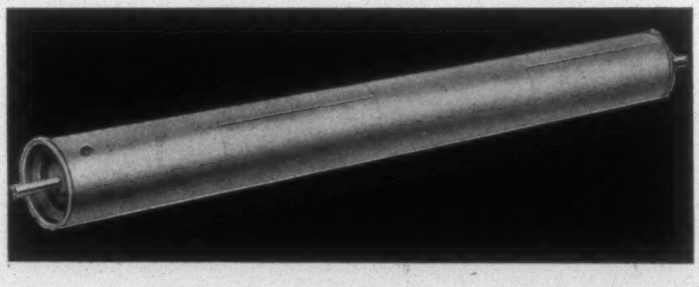

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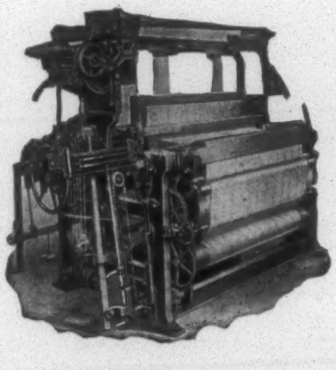
Cone Mills Corp., and J. C. Cowan, president of Burlington Mills Corp. Josiah Carter, editor of the *Southern Garment Manufacturer,* Atlanta, Ga., spoke in favor of the establishment of the course in garment design and manufacture.

On motion of Herman Cone, seconded by John W. Clark, it was voted to increase the board of directors by five for the purpose of garment trade representation. Named to represent the garment industry were the following: Ed Morris of Blue Bell, Inc., of Greensboro; N. W. Turner of N. & W. Overall Co. of Lynchburg, Va.; W. C. Harris of Carwood Mfg. Co. of Winder, Ga.; Mr. Carter; and Don Williamson of Williamson Dickey & Co., Ft. Worth, Tex. John K. Whitaker, president of Neuss, Hesslein & Co., New York, was placed on the board to succeed one member who had permanently retired from the textile industry.

The full board of directors, as elected, follows: Charles L. Amos, High Point, N. C.; Carl J. Beaver, China Grove, N. C.; C. A. Cannon, Kannapolis, N. C.; Josiah Carter, Atlanta, Ga.; W. J. Carter, Greensboro, N. C.; Thurmond Chatham, Elkin, N. C.; David Clark, Charlotte, N. C.; John W. Clark, Franklinville, N. C.; Carl A. Cline, Hickory, N. C.; W. B. Cole, Rockingham, N. C.; Herman Cone, Greensboro; J. C. Cowan, Greensboro; S. W. Cramer, Jr., Charlotte; R. S. Dickson, Charlotte; A. M. Dixon, Gastonia, N. C.; B. B. Gossett, Charlotte; Hugh M. Grey, Concord, N. C.; P. H. Hanes, Winston-Salem, N. C.; R. M. Hanes, Winston-Salem; Henry L. Harris, Galax, Va.; R. L. Harris, Roxboro, N. C.; W. C. Harris, Winder, Ga.; Luther H. Hodges, Spray, N. C.; R. H. Johnston, Charlotte; Joseph E. Kelly, Burlington, N. C.; K. P. Lewis, Durham, N. C.; J. Harold Lineberger, Belmont, N. C.; J. Spencer Love, Greensboro; George L. Lyerly, Hickory; W. L. Manning, Roanoke Rapids, N. C.; John F. Matheson, Mooresville, N. C.; Reid A. Maynard, Burlington; J. Ed Millis, High Point; E. A. Morris, Greensboro; A. G. Myers, Gastonia; W. H. Ruffin, Durham; W. P. Saunders, Robbins, N. C.; A. Alex Shuford, Hickory; K. S. Tanner, Spindale, N. C.; E. A. Terrell, Charlotte; N. W. Turner, Lynchburg, Va.; John K. Voehringer, Greensboro; John K. Whitaker, New York; H. W. Whitcomb, Spray; and Don Williamson, Ft. Worth, Tex.

At the meeting of the board of directors the following



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officers were re-elected: W. J. Carter, Greensboro, president; A. G. Myers, Gastonia, vice-president; W. H. Ruffin, Durham, treasurer; David Clark, Charlotte, secretary; and Aaron B. Quinn, Greensboro, assistant secretary and assistant treasurer.

A. S. T. M. To Meet In Detroit June-21-25

The 1948 annual meeting of the American Society for Testing Materials, the 51st such session of this national technical organization, is to be held in Detroit, Mich., the week beginning June 21. During this week there will be some technical sessions, with a large number of technical papers and reports in the field of materials. There will be more than 300 meetings of the society's technical committees, concentrating their work on standards and research in materials. Throughout the week of the meeting the society's Eighth Exhibit of Testing Apparatus and Related Equipment will be in progress. One of the most interesting features of the meeting will be the 1948 Edgar Marburg Lecture to be delivered by Paul Aebersold, chief of the isotopes division, Atomic Energy Commission, Oak Ridge, Tenn. He is expected to discuss the industrial applications of these materials which have such phenomenal prospects for industry and for mankind. This lecture is to be held on Thursday evening, June 24, at the Rackham Memorial Building. A cordial invitation is extended to anyone interested to attend his lecture, and also the other technical sessions and the apparatus exhibit. A. S. T. M. President T. A. Boyd, General Motors Research Laboratories, will give the annual president's address at the dinner on Wednesday, June 23.

A feature of A. S. T. M. annual meetings since 1898 has been the presentation by leaders in their fields, of technical papers covering various aspects of the field of materials, particularly reporting new data on properties of materials and methods of evaluating them. At the 1948 Detroit meeting some 20 distinct sessions are anticipated beginning Tuesday morning, June 22, and extending through Friday, the 25th. Responsibility for the society's 1,450 standards, specifications, and tests for materials, which are widely used throughout American industry, in fact throughout the world, rests with the 65 A. S. T. M. main technical committees, with upwards of 800 sub-committees and sections. Some 300 of these groups are meeting throughout the week in Detroit, beginning Sunday, June 20. Because of the large number of meetings and heavy registration expected throughout the week, certain committees will be grouped in co-operating hotels.

Displays of testing apparatus and laboratory supplies, all of which are so important in evaluating and testing materials and products, will be exhibited during the 1948 A. S. T. M. apparatus exhibit at the headquarters hotel, the Book-Cadillac. Every two years the society sponsors an exhibit, in which there are not only displays by the leading companies in the apparatus industry, but also special research and educational displays sponsored by the society's committees, research institutes, etc. This exhibit is a splendid opportunity to review the progress that is being made in this field.

Jacobs-Symmes-Comer Report Released

Dr. William P. Jacobs of Charlotte, N. C., president of the American Cotton Manufacturers Association, Fred Symmes of Greenville, S. C., and Donald Comer of Sylacauga, Ala., the latter two textile manufacturers as well as

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Ragan Rings are precise, uniform—fitting holders exactly. They are case-hardened, high polished and made in angle and straight web styles. Several hundred thousand are now running in leading mills around the world.

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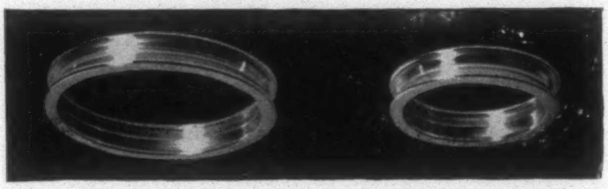

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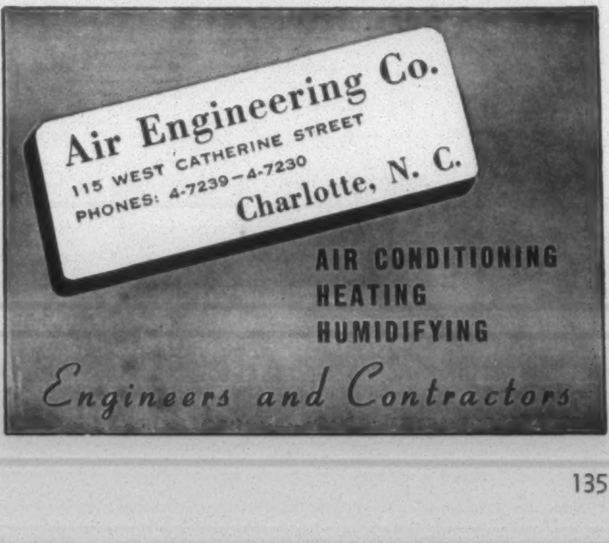

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past presidents of the A. C. M. A., have returned to the United States from Japan and their report and recommendations on merchandising Japanese cotton textiles has been released by the Army.

The report emphasized that a combination of circumstances will handicap the Japanese industry in competition in the world trade for several years to come. These include the difficulty of obtaining raw materials in a dollar market and selling manufactured yarn and cloth in soft currency areas; the shortage of fuel and power; the increase in wages to keep pace with inflationary trends without a compensating increase in revenues; the increase in unit cost of production without a compensating increase in machine hour production; the plans to change over ownership and management of the industry from the experienced personnel of the past to a relatively inexperienced new group; and the dissipation of needed surplus with which to finance expansion. Except for the relatively large quantity of manufactured cotton textiles on hand today, it is not likely that the Japanese textile industry can or will greatly influence the world textile market any time soon except in its normal field in the Orient, the group reported.

The report declared that the major problems facing the Japanese textile industry appears to be the disposition of 300 million yards of goods on hand now, and the organization of a resourceful merchandising program looking toward the sale of future Japanese production in theeir normal markets of the past. The greatest single problem in surmounting these difficulties is due primarily to the close connection of Japan with the United States, their benefactors.

The report explained the situation this way: "The United States is a dollar area. The American textile industry buys its raw materials, its labor and pays other costs with dollars. It can, therefore, only compete with the world market by making a quality product by mass production with the most modern processes and the very best of equipment. Even then it is difficult for a cotton manufacturer in a dollar area to export successfully and competitively into a soft currency area, and it is possible only in emergencies. The Japanese industry, so long as it buys American cotton and pays for it in dollars, poses the same problem but without the advantage of the efficient mass production methods and without

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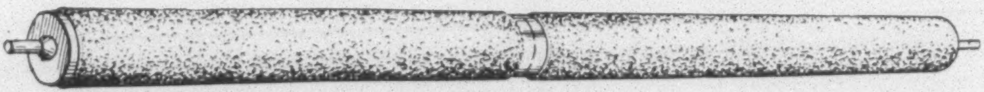

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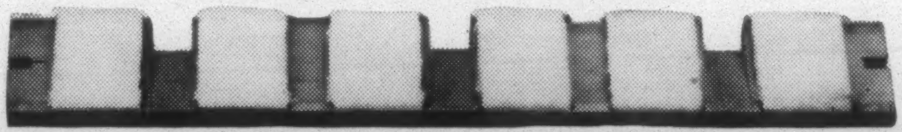

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ne advantage of a quality product, although they do have he advantage of a relatively low wage scale."

In all, 16 recommendations for handling the troublesome roblem were listed in the report, as follows: (1) Revolv-ng fund from the United States Congress for working capi-al to purchase cotton. (2) Set a commercial exchange rate or yen as soon as possible. (3) Organize a specialized group esponsible to S. C. A. P. to do the selling. (4) Add cloth-ng to food, medicine, and fertilizer in fund to prevent isease and unrest. (5) Sell half (150 million yards) of resent cotton textile surplus for such purpose domestically. 6) Delay sales as far as possible until Marshall Plan for urope and its probable effect upon Oriental and African olonies is determined. (7) Revise C. C. C. contract to ermit sale of goods for currency other than dollars, in-luding those goods blended from other C. C. C. cotton nd eliminate requirement of separate records. (8) Revise rice system for Japanese cotton textiles to a basis of the American market price. (9) Exhaust possibilities of nat-ural Oriental and colonial markets before trying others. (10) If normal Oriental and colonial markets not sufficient and ome dollar sales in the United States are necessary, limit ales in United States to amount needed to supply differ-ence between cost of dollar cotton and total dollars received rom sale of Japanese cotton textiles and silk. (11) Give Japanese the freedom of travel and sales action to assist in merchandising. (12) Use services of Japanese board of trade and textile associations to assist in merchandising. (13) Authorize selling to and through private firms as well as governments. (14) Allow Japanese to negotiate barter and three and four-cornered sales to produce dollars. (15) Permit Japanese to hold conferences of Orientals looking toward trade and barter and re-establishment of normal Jap-anese markets. (16) Encourage manufacture and finishing of silk cloth in Japan and its sale in the United States for dollars.

Textile Square Club Re-Elects Riemer

Harry Riemer, editor of *Daily News Record,* was re-elected president of the Textile Square Club for the 18th consecutive term at the annual meeting of the group held Jan. 27 in New York City. Walter Galley of Parker Wilder & Co., In., was chosen first vice-president; Carl Poorman of Williamson Dickie Co., second vice-president; and George S. Estes of Dumari Textile Co., third vice-president. Other officers elected were: Howard Owen, American Bleached Goods Co., Inc., treasurer; C. K. Evans, Mill

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Factors Corp., assistant treasurer; Roswell Kramer, secretary; and Vernon Hawley, Wellington Sears Co., Inc., assistant secretary.

Elected to serve on the executive committee were Samuel L. Hagan, M. Lowenstein & Sons, Inc., and Edward M Hill of E. M. Hill & Co., for three-year terms; and Albert H. Bullwinkel of Bachmann-Uxbridge Worsted Corp., for one year.

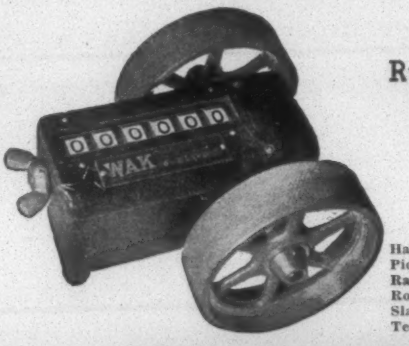
Activities of the group for the past year were reviewed by heads of various committees and recommendations for extensively expanding the club's scope were enthusiastically approved. Heads of committees and officers who submitted reports were: Mr. Riemer as president; Mr. Estes as treasurer; C. Ted Haase of Snider, Bumsted & Co., as head of the executive committee; Mr. Galley as head of the camp committee; Mr. Bullwinkel as head of the camp fund committee; and Roy Bagge, Independent Wholesale Dry Goods Association, Inc., as head of the membership committee.

Merits Of Design Copyright Bill Argued

The National Retail Dry Goods Association and other opponents of the Hartley Textile Design Copyright Bill (H. R. 2860) denounced the bill as "coercive" and "monopolistic" in a hearing before a House judiciary sub-committee in Washington Feb. 18.

Speaking for the N. R. D. G. A., Jules Labarthe, director of research for Kaufmann Department Stores, Inc., Pittsburgh, charged that under H. R. 2860 some concerns would be able to get textile design copyrights and then "control, hamper and eliminate competition, thus enjoying all the increments of monopoly in a field in which keen competition has benefited society tremendously. "We believe," he said, "that the high-quality textile manufacturer can always hold his market against lower-priced competition by the maintenance of his standards of quality and the integrity of quality and the integrity of his product rather than by design novelty alone."

Rep. Emanuel Celler (D., N. Y.) declared that if H. R. 2860 was enacted, "it would become a race of diligence among thieves, and the question would be who would pirate a design first." The New York representative also argued that the textile industry had made what he insisted



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were "extortionate" profits last year—and this was proof, in itself, that there was no need for this legislation.

Gilbert H. Robinson, executive vice-president of Julius Forstmann Corp., testified, on the other hand, that the bill would harm only unethical garment manufacturers and retailers who sold goods with a pirated design. Mr. Robinson, one of the sponsors of the measure, said he formerly was divisional merchandise manager for Marshall Field, Chicago, and, on the basis of his long experience in the purchase of women's clothing, was convinced that "the retailer can benefit by this bill."

Irene Blunt, secretary of the National Federation of Textiles, New York, and head of the Textile Bureau, told the sub-committee more than 100,000 textile designs had voluntarily been registered with her organization. The experience of this organization, she said, proves that the Hartley bill's plan to have the registrar of copyrights handle all textile design registrations will work out satisfactorily, too. Miss Blunt explained that the Hartley bill covered only textiles—rather than all industrial designs for leather, plastics, etc.—because "the textile industry is willing to be a guinea pig to see whether it will work."

Arthur Besse, president, National Association of Wool Manufacturers, testified that outside of two woolen companies (Forstmann and Botany), he knew of no wool manufacturer who was for this bill. However, he said, "we are not opposed to having the converters of rayon, silk and cotton getting protection" so long as the measure does not include woolen designs.

Rep. W. Harper Welborn of Anderson, S. C., has introduced a new bill before the South Carolina House of Representatives pertaining to atmospheric conditions in textile plants which may prove more acceptable than was a similar measure he introduced last year—and more practicable. The bill would require all textile and garment plants to install some form of air-change and cleaning equipment designed to control both temperature and humidity. It also would create a part-time board or commission to enforce provisions of the law and to exercise certain regulatory authority.

Mr. Welborn's original bill would have created certain rigid standards of temperature and humidity for textile and garment plants. Testimony of experts before the House commerce and manufactures committee indicated that to meet these standards plants probably would have to install air conditioning equipment of the refrigerated type and that, even then, they might fail to meet the requirements.

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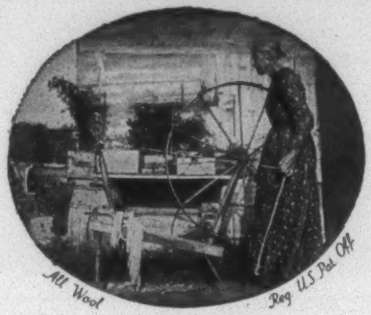

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Merchants Eye Commodity Price Drop

In New York City's Worth Street section, textile headquarters of the world, there currently is a good deal of nervousness because of the recent plunge in commodity prices. Persons in the cotton goods market are wondering whether raw cotton, and then cotton textiles, will be next.

Undoubtedly, "cotton textile prices are vulnerable," states one market observer. "They are 300 to 500 per cent higher than before the war." The trade mostly has adopted its proverbial wait-and-see position. Buyers are not anxious to place new orders for future delivery. Spokesmen for some mills say they are going to see what happens before taking more forward orders. It is felt generally that the end of February will see some answer as to what will happen in textiles.

Meanwhile, cotton goods manufacturers are keeping one eye on the consumer and retailer, and the other on the raw cotton market.

The general business picture may cause the consumer and retailer to stop buying. Or the cotton market might follow the lead of other commodities. Either, or both, of those things could cause serious trouble.

The textile industry is closely watching the second-hand market—the prices that dealers are asking for goods for immediate delivery. Those prices, they said, change more rapidly than mill prices. Mill executives point out that the second-hand market has weakened recently. In some instances, that has been reflected in a modification of mill prices.

Whether that downward trend represents an orderly price adjustment or may end in rout, textile sources said, will be determined by whether various groups with heavy stocks of cotton goods decide to unload them.

"If speculators in the second-hand market suddenly think it is a good idea to dump cotton goods, it could play havoc with all cotton goods prices," a mill executive said.

No one knows just how much of such goods is around. Nor do they know how many middle men in converting and cutting of goods have heavy inventories. Those who have, may be financially squeezed and decide to liquidate their holdings.

Trade sources said two things could cause such unloading. The general business reaction to the commodity market break could frighten holders of heavy stocks of textile into selling them. Or a sustained sharp break in the raw cotton market could have a similar effect.

One mill spokesman said cotton goods are becoming more sensitive to raw cotton prices than at any time since the war began.

Some in the industry say a break such as has occurred in

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ther commodities is not likely to come in the cotton mar- et. They say cotton has not fluctuated as widely as grains, or instance. The say there is a world shortage of cotton nd that the wartime backlog of demand for cotton goods has not yet been satisfied.

Speculative trading in fabrics is said to have availed more than a few cutters of profits which did not involve manufacturing. In some instances, it is asserted, these profits equaled or surpassed what the cutters might have made on finished garments. At the same time, such trading unquestionably served to spiral fabric costs.

Nobody can doubt seriously that a substantial proportion of the goods available in gray markets originated from manufacturing sources.

Cutters were susceptible to the temptation of accepting quick turnover and easy profits without the necessity of entailing the expenses or risks of processing the goods. Ironically, such materials ultimately found their way into overpriced articles.

The extent to which producers' demand has been stimulated by gray-market trading is incalculable, but the latter's influence is indubitable. The seller who has been able to choose his buyer soon may have to seek him.

SPINNING ACTIVITY

January Spinning Statistics Show Rise

The Census Bureau has reported that the cotton spinning industry operated during January at 132 per cent of capacity on a two-shift, 80-hour week basis, compared with 114.2 per cent during December last year, and 123.3 per cent during January last year.

Total of spinning spindles in place Jan. 31 was 23,786,000, of which 21,450,000 were active at some time during the month, compared with 23,730,000 and 21,412,000 for December last year, and 23,858,244 and 21,919,368 for January a year ago.

Active spindle hours for January totaled 10,802,000,000 or an average of 454 hours per spindle in place, compared with 9,544,000,000 and 402 for December last year, and 10,587,614,246 and 444 for January last year.

Spinning spindles in place Jan. 31 included: in cotton-growing states, 18,229,000, of which 16,958,000 were active, compared with 18,164,000 and 16,896,000 for December last year, and 18,113,526 and 17,041,652 for January a year ago; and in New England states, 5,004,000 and 4,063,000 compared with 5,012,000 and 4,086,000, and 5,156,074 and 4,347,584.

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growing states, 9,084,000,000, or an average of 498 per spindle in place, compared with 7,890,000,000 and 434 for December last year, and 8,845,209,334 and 489 for January a year ago; and in New England states 1,582,000,000 and 316, compared with 1,522,000,000 and 304 and 1,574,035,874 and 305.

Lint cotton consumed during January totaled 860,202 bales compared with 753,406 in December of last year and 949,994 during January of 1947. Consumption for the six months ended Jan. 31 totaled 4,637,371 bales compared with 5,213,413 for the corresponding period a year previously.

More Long Staple Is Requested

The Cotton-Textile Institute, Inc., urged the Tariff Commission in Washington Feb. 17 to remove quotas entirely from all extra long staple cottons of $1\frac{3}{8}$ inches and longer, by lowering the top effective staple limit under the quota system from the present $1\frac{3}{8}$ inches to $1\frac{5}{16}$ inches. This position, advanced by Percy S. Howe, Jr., president of American Thread Co. and chairman of the board of the Cotton-Textile Institute, was supported and amplified by other spokesmen for the thread and textile industries.

It was opposed just as vigorously by John H. Dean, acting assistant director of the Cotton Branch, Production and Marketing Administration, Department of Agriculture, by a group of cotton state Congressmen, and by representatives of associations of Southern and Western cotton growers and shippers. This side of the debate argued that there was plenty of long staple cotton in the United States to meet all the mill men's needs and that any increase in the quota (let alone the lifting of the quota altogether) would mean flooding the American markets with foreign cotton, depressing cotton prices and making more American cotton available for export—under a subsidy.

SOUTHERN SOURCES OF SUPPLY for Equipment, Parts, Material, Service

Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

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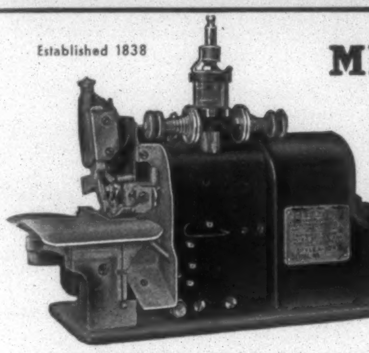

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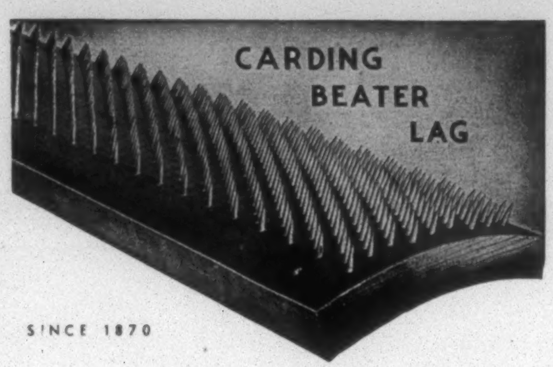

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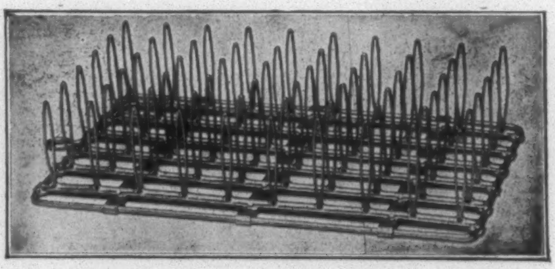

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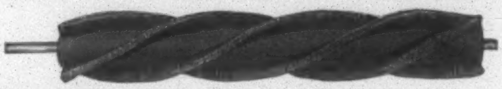

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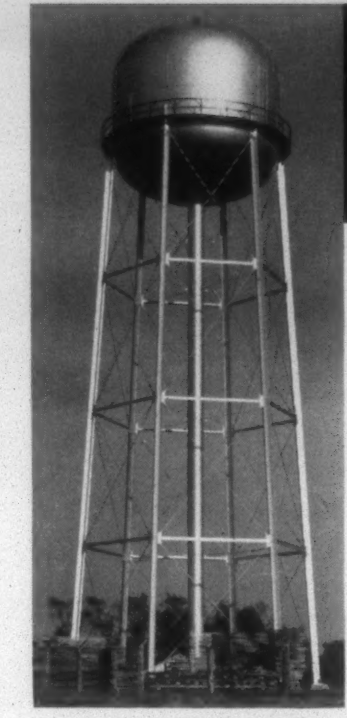

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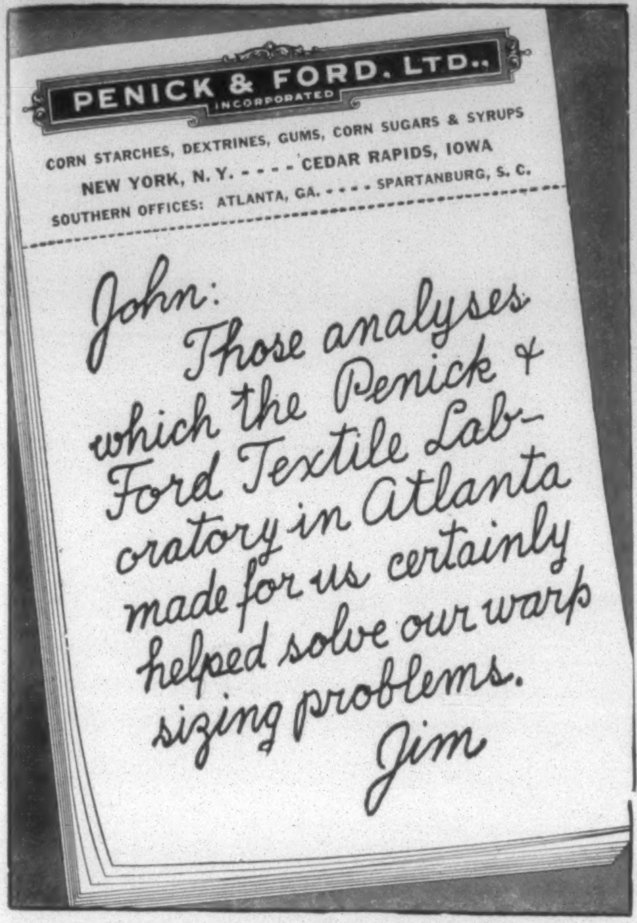

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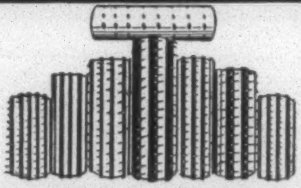

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Before Closing Down

– TEXTILE INDUSTRY HAPPENINGS AS THE MONTH ENDED –

Mill News

SLATER, S. C. — Two hundred 50-inch Draper looms are being installed at Slater Mfg. Co., replacing a like number of 40-inch machines.

DRAKE'S BRANCH, VA. — Ground has been broken on the 150-acre tract where Pacific Mills will operate its new worsted plant, to be known as Drake Mills. The one-story brick structure is being constructed by C. M. Guest & Son of Greensboro, N. C.

WOODRUFF, S. C.—Brandon Corp. is installing fluorescent lighting units throughout its entire local plant. A freight elevator of 4,000-pound capacity also is being installed. All looms in the plant are being reconditioned.

COWPENS, S. C.—Linda Cotton Mills, Inc., a subsidiary of Leading Embroidery Co., has received a charter. Formerly known as Leading Cotton Mills, the Linda plant has no connection with the recently chartered Cowpens Cotton Mills, Inc.

GREENSBORO, N. C. — Proximity Mills, Inc., and Revolution Mills, Inc., each has been incorporated with capital stock of $150. Subscribers in the first instance are Herman Cone, M. W. Heiss and Harold Smith, in the second Mr. Cone, Mr. Smith and W. H. Hines.

CHARLOTTE, N. C.—Textron, Inc., has sold the Calvine Mill village for approximately $120,000 to H. B. Meiselman of Charlotte.

PACOLET, S. C.—Pacolet Mfg. Co. recently has installed complete opening room machinery in its No. 3 Plant. Equipment for the No. 5 Plant opening room is expected to be installed at an early date, as well as new drawing and roving frames and warp spinning. Card room machinery in the No. 3 Plant is to be revamped soon, and five new shearing machines will be installed in the cloth room.

FLETCHER, N. C.—Cranston (R. I.) Print Works Co. has purchased an 85-acre tract between here and Brickton, N. C., where a finishing plant is to be erected. The site is about 13 miles south of Asheville.

COLUMBIANA, ALA.—Valley Mills, Inc., operator of Buck Creek Cotton mills at Siluria, Ala., has announced plans to establish a cotton goods manufacturing plant i Columbiana. Citizens of Columbiana are being asked to purchase $100,000 in Valle Mills stock to aid in setting up the nev plant, which will employ some 300 persons.

Personal News

James L. Teat of Taylorsville, N. C., i now overseer of spinning for Algodon Mfg. Co., Bessemer City, N. S. The overseer of carding at Algodon is H. P. Thomas of Whitehall, Ga. C. O. Smith, formerly of High Shoals, N. C., is superintendent at Algodon as well as Central Yarn & Dyeing Co. John B. Teat of Athens, Ga., is overseer of spinning at Central.

Robert Leeson, president of Universal Winding Co., Providence, R. I., has been elected president of the National Association of Textile Machinery Manufacturers. He suceeds Thomas H. West, president of Draper Corp., Hopedale, Mass. Also named at the group's recent meeting in Boston, Mass., were J. Hugh Bolton, who replaces Mr. Leeson as vice-president, and Theodore Dewhurst of Universal Winding, who replaces Howard L. Smith of Draper as secretary.

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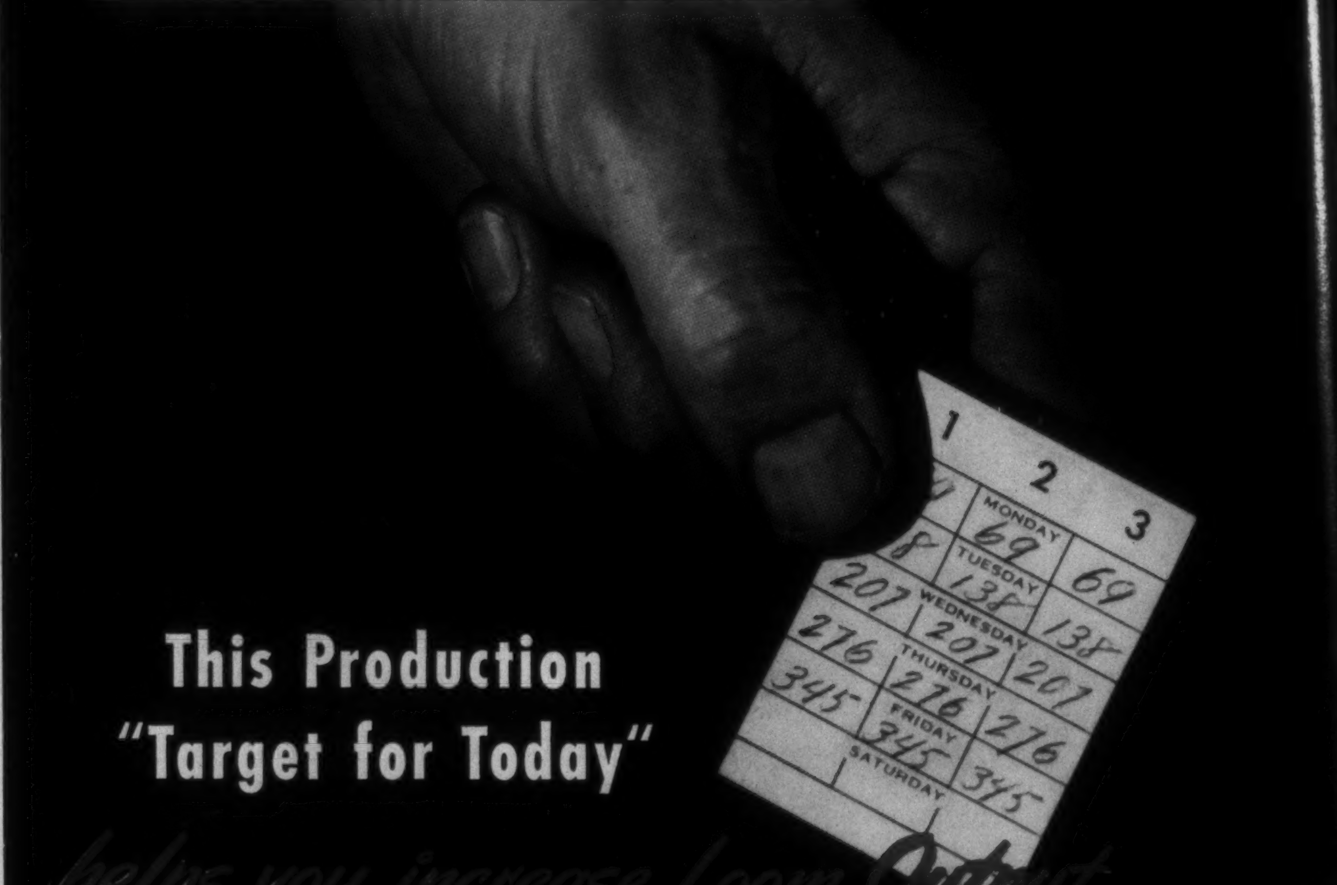

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